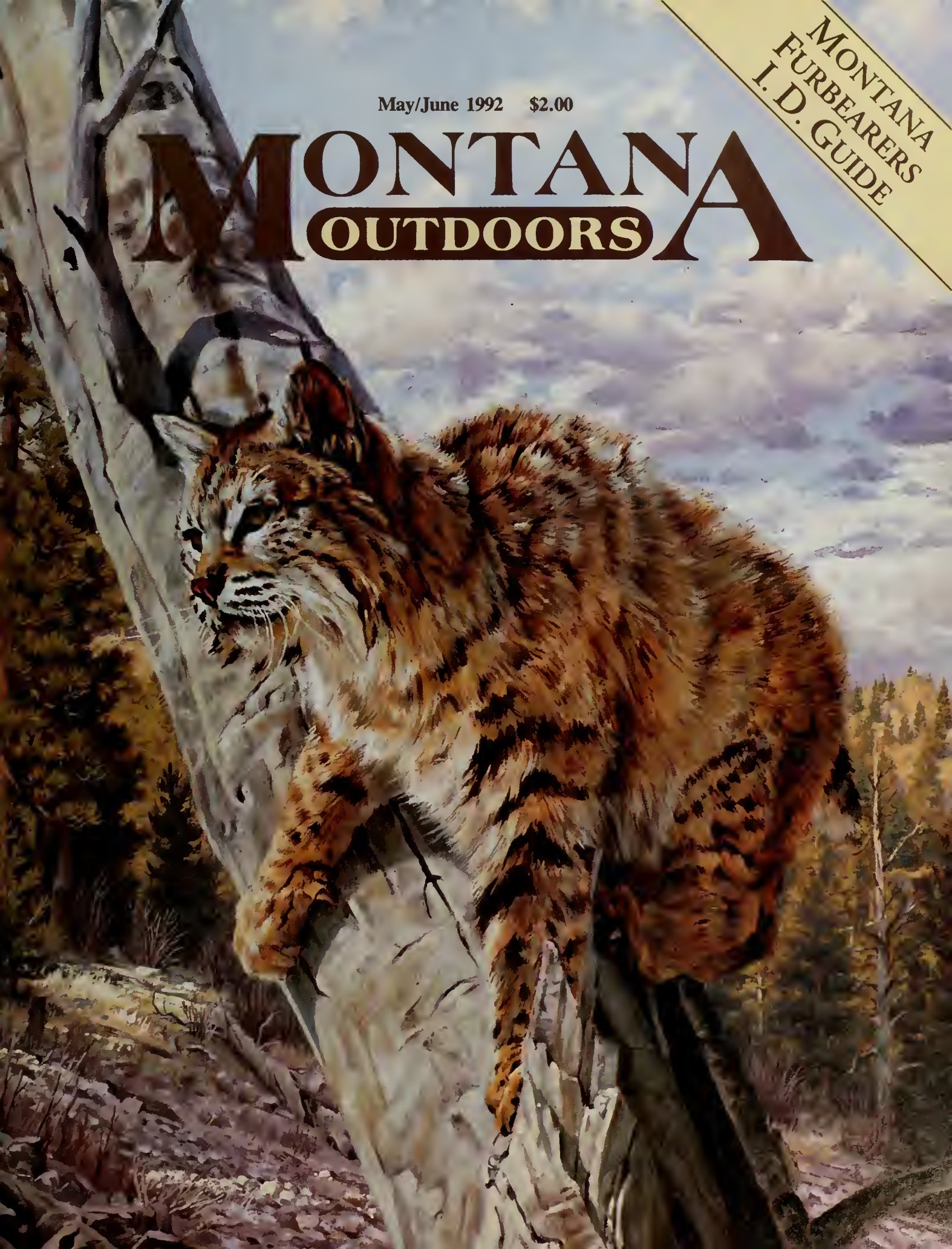
May/June 1992 $2.00

MONTANA OUTDOORS

MONTANA FURBEARERS I. D. GUIDE



Our Point of View

DON WHEELER

CHANGE: WE EXPECT WILDLIFE POPULATIONS to adapt. We modify their habitats, and attempt to regulate their numbers to achieve our management objectives.

Our biologists and natural resource managers spend their professional lives implementing management programs designed to effect change. We regard natural change—drought, wildfire, and the changing seasons—as normal. We effect man-made change—timber harvest, fish stocking programs, and hunting seasons—to achieve desired change.

However, as professional natural resource managers, we do not as easily accept that our operating environment is changing. Nor do we easily embrace the necessary changes we must make to professionally manage this agency now and in the future.

Our world certainly isn't standing still. In fact, learning to change and changing to learn is an important part of our responsibility to the future of the special resources we hold in our trust. It is also part of our responsibility to you, our customers, and to our employees.

Our success depends on recognizing our operating environment and anticipating the changes that will be necessary.

We know the demographics of our state are changing. How will this influence customer attitudes toward fish, wildlife, and parks?

We recognize that Montanans are increasingly influenced by interests from outside our state. Will this continue? Will we learn to manage outside influences?

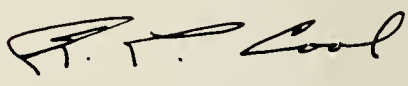
We realize that public views toward fish, wildlife, and parks are changing. There is increased demand by the public for involvement in resource decisions and for accountability by this department.

We believe there is an increasing value of and competition for the fish, wildlife, and parks resources your department manages; yet, there is certainly opportunity to enhance these resources. We expect that this department will see expanding responsibilities and increasing need to define, defend, and coordinate management decisions.

We also recognize that we can't be "all things to all people." Our resource actions and decisions will be made with consideration for a wide spectrum of values within biological, cultural, social, legal, and economic parameters.

All this has been factored into what we've learned during the last two years as we've worked with our customers, our Commission, and our employees to develop a vision and a set of goals for our department. It's something that will set long-term direction, yet provide the flexibility we will need to adapt to our changing environment.

We approach our responsibilities with pride, dedication, creativity, and enthusiasm, recognizing that effective managers value change. In this issue, a very special employee has written "Shelter from the Storm." I invite you to discover through Ben Gordon's eyes our vision for the future.



K.L. Cool
Director
Montana Department of Fish, Wildlife & Parks

ROBERT NEAVES

Turn to page 11 for an identification guide to Montana's furbearers.

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Back Cover—With a wingspan of about six feet and weighing between five and eight pounds, the great blue heron is one of Montana's most arresting birds. Share for a moment the quiet and solitude of the heron's world through the back cover photograph of Jackson, Mississippi, photographer **Joe Mac Hudspeth, Jr.**

WATCHABLE WILDLIFE

AVIAN SLINGSHOT

by JIM KEENER

RALEIGH MEADE

RALEIGH MEADE

BESIDE KELLY ISLAND on the outskirts of Missoula, looking more like a snag than a bird, a great blue heron stands motionless in the rippling shallows of the Clark Fork River. It waits. And watches. And waits. As a fish comes within striking distance, the bird pulls its head back and down toward the base of its neck, an avian slingshot ready for the kill. Suddenly, with snakelike speed, the heron thrusts its bill into the water, spearing a sucker behind the head.

The heron flips the fish to shore and scissors the meal between its bill. After slapping the sucker against the rocks to be sure it is dead, the heron holds it a few inches above its head and swallows it head first. The bird's neck swells a bit as the fish slides down. The heron soon resumes its watch for the next morsel. Only the black pupils at the center of its translucent yellow eyes show movement, as it scans the riffles for unsuspecting prey.

When it is done foraging for the evening, the heron spreads its long wings, stretches its neck forward as if to pull its body along behind, and flaps its wings powerfully. Once off the water and under way, the bird folds its neck over its upper back in an "S" curve, raises its dangling legs and extends them straight back, and disappears around a river bend with slow, graceful strokes.

Averaging three feet in height with a wingspan of about six feet, and weighing between five and eight pounds, the great blue heron (*Ardea herodias*) is one of Montana's most noticeable birds. Widespread throughout the entire state and country, it is America's largest and best known heron.

A carnivore for the most part, the great blue heron's diet consists of a wide variety of aquatic and terrestrial vittles. Most often feeding on nongame fish such as bullheads and suckers, it also eats frogs, salamanders, lizards, snakes, and crayfish. The insect portion of the bird's diet consists of grasshoppers, dragonflies, flies, moths, and butterflies. Mice, young rats, shrews, ground squirrels, and other small rodents are also part of the heron's diet. Occasionally, a heron will kill and swallow phalaropes, rails, and other small shorebirds. But herons do eat some grasses that help them form pellets of indigestible food matter, such as fish scales and bones, which they regurgitate.

Research done on three heronries in northwestern Montana in the 1970s by University of Montana graduate student Dennis Billings revealed that 88% of the heron's diet came from fish,

with rodents and insects making up the remainder. Suckers accounted for 40%, pumpkinseed and longnose dace 13%, trout 9%, and other fish 13%.

An opportunistic forager, the heron is sometimes a nuisance at unprotected fish hatcheries. According to Marcy Bishop, a biologist who has studied western Montana heronries for 17 years, "An individual great blue heron usually follows a daily foraging routine and doesn't divert from it greatly unless it is stressed. Then it will range out for the easiest prey available."

Occasionally, a heron's eyes will be too big for its stomach, or more appropriately, its neck. Some have choked to death trying to swallow fish too large, the prey lodging in their throats. A heron can endanger its life by striking at fish too large and strong to catch. John Audubon wrote in the 1840s of a heron that, "...after striking a fish, when standing in the water to the full length of its legs, was dragged along for several yards, now on the [water] surface, and again beneath. When, after a severe struggle, the heron disengaged itself, it appeared quite overcome, and stood still near the shore, his head turned from the sea, as if afraid to try another such experiment."

And though it usually has good aim, the heron will occasionally only wound its prey. According to George Holton, a retired fisheries biologist and avid bird-watcher, "It's not unusual for a person fishing to catch fish that have escaped after being speared by great blue herons."

The foraging behavior of the great blue heron cannot be easily defined. The heron seems to take literally to the old adage, "catch as catch can." In addition to its usual method of quiet stalking, the great blue heron has been known to dive at and pirate food from gulls; to follow the wake of dolphins forcing schools of fish into shallow water, then feed along with the dolphins; to land on deep water and float while foraging; and to float downstream on rivers, jabbing at fish along the way. Researchers Steven Morey and Allan Smits watched a great blue heron feed at a California lake by plunging 10 meters into the water for bluegills.

The heron's terrestrial foraging is a picture of stealth. Its bill pointed above the horizon, it moves toward a frog, sometimes taking half a minute to lift and set down one leg, even holding its toes spread open in mid-step. It may freeze in mid-stalk for several minutes. Once within striking range, the bird retracts its head back toward the base of its neck and in the blink of an eye both bill and body thrust forward, spearing the frog behind the head. A few slaps against the ground ensure the victim is dead. Then the heron grabs the frog and walks to the water's edge to rinse it, since a wet victim is easier to swallow. A flip into the air, a head-first swallow, and again the heron dines.

The spindly legs of the great blue heron distinguish it from other orders of birds. The knee joint, hidden from view by feathers, is set high, toward the bird's body. The prominent joint in the middle of the heron's leg—the one that bends forward—is actually the heron's ankle. The lower half of the bird's leg is comprised of a number of fused heel and foot bones. The foot of a heron is nothing more than the heron's toes, upon which the bird stands, walks, and lands. Though not webbed, the three-inch toes keep the heron from sinking in the mud.

HARRY ENGELS

JOE MAC HUDSPETH, JR

Herons return to the same nests year after year, using old nests to continue breeding colonies, called heronries.

The heron's long, curved neck can be a liability as well as an asset. Two Canadian researchers, L. Scott Forbes and Ed McMackin, have watched great blue herons attack each other for limited food. The more powerful heron will grasp the neck of the weaker bird and hold it under water for a few moments. Often the bird will come up from the dunking with the prey still grasped in its beak.

During breeding season, the heron's plumage undergoes color changes; the somewhat brighter feathers on the head and back, called "aigrettes," are involved in courtship displays. These beautiful feathers were highly sought for the millinery

trade in the late 1800s and early 1900s. Herons and egrets in Europe and America were killed so their plumes could adorn the hats and dresses of fashionable ladies. Millions of birds were slaughtered, and millions more nestlings were left to starve as a result of their parents' absence. The Audubon Society came into existence largely because of the public outcry caused by this wholesale destruction.

The heron mating season in Montana extends from late March to the end of April. Male herons are often seen attempting to impress prospective mates during this period with the "stretch display," a graceful maneuver in which the head and neck are stretched upward. With neck feathers erect, bill pointing straight up, and all feathers except the chest plumes depressed, the heron holds this position momentarily then lowers it head and neck down and backward so that the tip of the black, trailing head plume almost touches the middle of the back. Noisy during their courtship display, herons make a honking noise that sounds something like "fhrank frawnk."

Great blue herons are seasonally monogamous, and both birds work on building or improving the nest. Nests are usually placed in a crotch or on a large tree limb, sometimes far above the ground. Herons return to the same nesting areas year after year, using old nests to continue breeding colonies, called heronries. The nests, which average three feet in diameter, are supplemented each year with new materials until a mosslike covering lines the bed.

In Montana, the peak of egg-laying occurs between the 20th and 25th of April. After the female heron lays her three to five pale-blue eggs, both parents share incubation duties. The eggs hatch in about four weeks, and the adults begin to feed their awkward, ungainly offspring. At first they regurgitate partially digested fish directly into the baby herons' mouths, but later they regurgitate small whole fish into the bottom of the nest. Although the young can make short flights by the time they are seven weeks old, they usually stay at the nest site to be fed by the parents until they are several weeks older.

Following the breeding and nesting season, young birds disperse in all directions. In fall, most herons migrate to warmer climates, either individually or in small flocks. Northward migration in spring takes place mainly in March and early April.

Heronries in Montana are found primarily in cottonwood bottomlands. In a 1980 study conducted in northwestern Montana by University of Montana graduate student Jill Parker, 88% of heron nests were found in cottonwood trees. Parker's study included 22 colonies (of a possible 26) located along three rivers: the Bitterroot, Clark Fork, and Flathead (both above and below Kerr Dam). Parker found that herons will abandon a colony when there is no longer a sufficient number of suitable nest trees or when the site becomes undesirable due to lack of isolation.

Herons often shift nest sites from dead to living cottonwoods, perhaps because the branches of live trees are less likely to break. Some people believe that herons are responsible for killing cottonwoods because their droppings are so acidic; however, usually only the small terminal branches are killed, not the trees themselves. Because herons only use their nests for approximately four months in spring and early summer, the foliage normally has time to recover.

In Parker's study area, the mean colony size decreased between 1969 and 1979, but the number of smaller colonies increased. The herons adapted to smaller colonies, and showed no decrease in reproduction. Overall, the heron population increased from 10% to 15% during the study period. She concluded: "Herons in small colonies do no worse reproductively than herons in large colonies, and small colonies have become increasingly common over the last 10 years." However, more research needs to be done on these isolated habitats to accurately monitor the population changes and to determine if we are witnessing a period of behavioral modification in the wake of land development by man.

The average number of great blue heron nests in northwestern Montana colonies—26—is considerably fewer than the average in other places. For example, the average in Manitoba is 57; in Minnesota's Chippewa National Forest, 52; and on the Oregon coast, 70 nests. In heronries along the Yellowstone River in eastern Montana, the number of nests varies from as few as five to as many as 300.

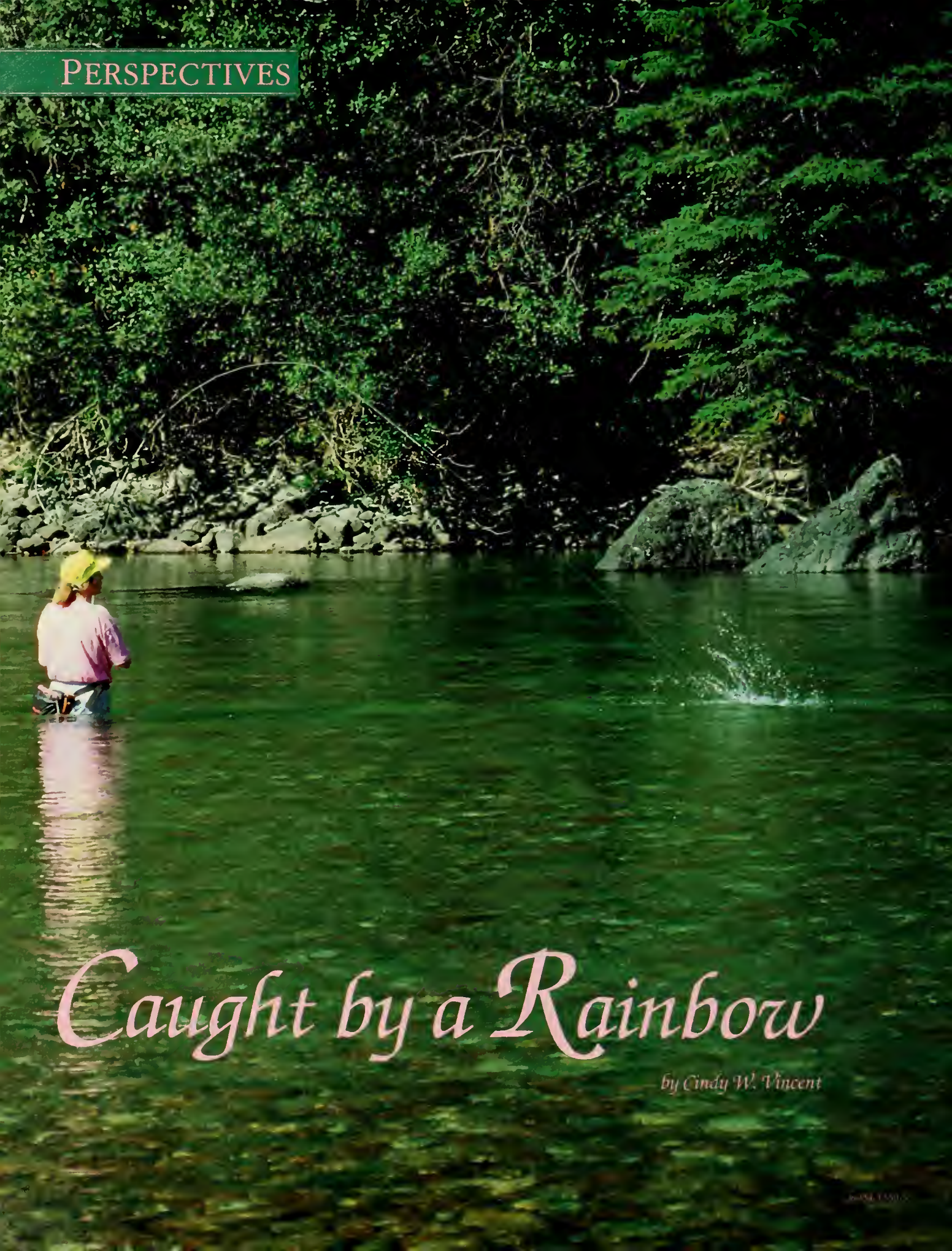
Occasionally, a heron's eyes will be too big for its stomach, or more appropriately, its neck. Some have choked to death trying to swallow fish too large, the prey lodging in their throats.

Another feature of Montana's heronries is their short life span, typically only five to 15 years. In other areas of the country, some colonies have been in existence for four or five decades.

Many species of birds, such as cormorants, Canada geese, bald eagles, and great horned owls, use heron nests that are either abandoned or currently unused, and nest along with the herons. At different times of year, other species of birds sometimes use heron nests in a sort of time-share arrangement. Thus, when we lose river bottom cottonwood habitat, we stand to lose some of these birds along with the herons.

Parker's recommendations for maintaining nesting habitat for herons include protecting mature cottonwoods up to 100 meters from a water's edge, and maintaining the isolation of heronries to protect them from disturbance, especially during breeding season. She also recommends that heron habitat be censused every three to five years.

Because of its size and abundance, the great blue heron is one of Montana's most watchable wildlife species. Dusk and dawn are the best times to view these graceful birds. You will need only patience and a sharp eye, although binoculars are useful. If you wait on a river bank near a shallows or riffle, a heron may alight and begin feeding. By remaining perfectly still and blending in with the surroundings, you can share for a time the quiet and solitude of the heron's world. ■



Caught by a Rainbow

by Cindy W. Vincent

I CAUGHT MY FIRST RAINBOW—trout, that is. And suddenly I had passed through an unspoken rite among those who worship the sport of fly-fishing. No longer was I a mere student. I had become a real fisherperson. The moment in time would be added to my collection of favorite memories.

As I watched the fish still wriggling with my caddis fly caught in the side of its mouth, I was surprised by the emotional high of it all. Out of the corner of my eye, I saw my husband wading in my direction, smiling. He was obviously proud.

If someone had told me a year ago that I could get this excited about catching a fish, I would have told him he was crazy. And I'll be honest. I started fly-fishing because it was a sport my husband enjoyed. Not very independent and liberated, I know, but true. We would go fishing on Saturdays, and I would watch while he reeled in fish after fish. I continued to cast but quickly got bored when I wouldn't even get a nibble. Still, I wondered why I saw so many people spending an entire day fishing a stream. They knew something I didn't, and I wanted to find out what that "something" was.

So I enrolled in a fly-fishing class at a local community college. My girlfriends reacted first with disbelief and then with amusement. Why would I want to take a class on fishing? Perhaps, they decided, it would provide me with a unique shopping experience, searching the local mall for the "right" fishing outfit. (Oddly enough, I did go shopping for fishing attire after learning what colors to wear and not to wear on a stream.) Although my female friends considered me a novelty, my husband was completely supportive of my undertaking.

On the evening of the first class, I was feeling pretty nervous as I parked my car and headed into the building. It dawned on me that I might be the only woman there. I imagined the worst-case scenario: a room full of men belching and making crude references to female anatomy. Trying to be inconspicuous, I sneaked in and took a seat in the back of the room.

Within seconds, the instructor had spotted me. Looking at his registration list, he figured out who I was (not a great challenge, I'm sure, since there was only one other woman in the group of 20 or more men). He called out my name two or three times, checking and rechecking the pronunciation. Then he invited me to sit in front. Okay, so much for being inconspicuous.

Within the first hour, I discovered my fears were completely unfounded anyway. Although the other woman and I banded together quickly, it wasn't long before I realized the male participants were treating us with respect and appreciation. In fact, the whole "male-female thing" eventually disappeared. We became nothing more than a group of people who wanted to learn how to fly-fish. As the classes progressed, I came to admire the intelligent and well-mannered "gentlemen" sitting around me. I now recommend fly-fishing classes to those same girlfriends who complain about not being able to meet "nice" guys.

Plus, I found I wasn't really so out of place. The first night we learned one of the most noted people in fly-fishing history was a woman: Dame Juliana Berner of 15th-century England is known as the Mother of Fly-Fishing. I started to feel right at home.

The class was taught by a "professional" fly-fisher whose voice inflection reminded me of John Wayne. This made for some interesting after-class impressions. I was convinced he was the original Anal Retentive Fisherman when he didn't leave out a single detail about every possible genus and species of mayfly. Then he brought in his 32-pocket fishing vest that included three means of starting a fire and a kit for removing fish hooks from human tissue. Ugh! We spent eight, three-hour sessions learning about equipment, flies, fishing conditions, and the anatomy of the stream.

I left each class feeling like a light bulb had just been turned on inside my head. I had no idea how much there was to know about fly-fishing. Most important, I learned what I had been doing wrong and what corrections I needed to make.

When vacation time rolled around last summer, it was MY idea to travel through Wyoming and Montana where I could put my new knowledge to the test. In preparation for the trip, I stopped at a local sporting goods store to stock up.

I stood at the counter for half an hour while the clerk waited on the male customers. By the time he got to me, I was pretty irritated. "I'll take a size five, aqua, weight-forward, floating fly line," I informed him, without missing a beat.

His eyes opened wide and his mouth gaped. "Wow," he gushed, "a lady fly-fisherman."

What could I say? I simply smiled. Before he had finished ringing up my purchases at the cash register, he had asked me at least a dozen questions about equipment and fly-fishing in general. I merely called up the information I had learned in my class and answered him matter of factly. He hung on my every word. He looked at me as though he expected to see my picture in a fishing magazine somewhere making a professional endorsement. For a second, it crossed my mind to tell him I was nothing more than a floundering amateur. But then I thought, Hey why spoil it for him. He didn't have to know that all I'd ever caught was a couple of little brookies. Besides, I was having too much fun!

While we were packing for our trip, a few of my husband's friends stopped by. Spotting my fishing vest on the kitchen table, they examined my thermometer, hemostat, and guppy net dangling in front. "Pretty scientific," one of them chortled, "but let's see who catches the most fish."

Days later when we were fishing Montana's Gallatin River, I wished I had made a little wager with my husband's friend—perhaps something that involved large sums of cash. It was that day I caught my first rainbow. Minutes later, I landed a feisty brown. And, yes, I caught the most fish. Regardless, my husband enjoys bragging to them about having a wife who loves to go fishing as much as he does.

When it comes to fly-fishing, I still have a lot to learn. Yet for me, that is probably one of the greatest attractions. I am fascinated by the science behind the art. I can truly understand why so many people spend an entire Saturday somewhere in the middle of a stream.

I know I have fallen in love with fly-fishing. My rainbow trout was released. But I wasn't. I'm sure I'll be fishing for the rest of my life. ■

MONTANA TO HOST NATIONAL HUNTING SYMPOSIUM IN JULY

From July 16-18, the nation's wildlife conservation leaders will gather in Bozeman, Montana, to discuss the past and future of North America's wildlife conservation movement. For three days, more than 30 speakers—and up to 1,200 participants—will consider the movement's shortcomings and accomplishments and explore a renewed understanding of hunting and wildlife management.

The Governor's Symposium on North America's Hunting Heritage is the first of its kind. "By exploring the human motivation to hunt from professional, cultural, and historical points of view, participants can learn how hunting was and remains an inseparable part of wildlife conservation," said Montana Governor Stan Stephens.

Among more than two dozen nationally prominent wildlife conservation leaders who will participate are Matthew B. Connolly, Jr., executive vice president, Ducks Unlimited, Inc.; Jay D. Hair, president and CEO, National Wildlife Federation; Michael Hayden, assistant secretary, U.S. Department of the Interior; and John F. Turner, director, U.S. Fish and Wildlife Service.

Also participating in the conference is anthropologist Richard Nelson. His recent book, "The Island Within," won the 1991 John Burroughs Medal for outstanding nature writing.

The symposium program will cover more than 20 topics in six major areas including: The Human Hunting Motivation; North America's Hunting Heritage; Hunting Under Fire; The Media Looks at the Hunt; Rally the Hunter; and a Call to Action. The Call to Action series will include four grass-roots planning and strategy sessions for recreational hunters, professional managers, commercial interests, and private landowners.

A $50 registration fee includes program materials, abstracts of papers, refreshments, one lunch, and a barbecue dinner. Space is limited, so conference organizers urge early registration. For information, write to: Governor's Symposium on North America's Hunting Heritage, Department of Fish, Wildlife & Parks, 1420 East Sixth Avenue; Helena, MT 59620, or phone 406/444-2535.

GOING BOATING? CHECK OUT THE NEW LAWS

Motorboat operators, water-skiers, and jet ski enthusiasts should be aware that changes to the boating laws made during the 1991 Montana Legislature are now in effect and will be enforced this summer. Here's a capsule summary:

- **Motorboat Operator Age Limit**

A child under 13 years of age may not operate a motorboat or jet ski (personal watercraft) equipped with a motor greater than 10 horsepower, unless someone at least 18 years of age is also on board.

- **Water-Skiers**

It takes at least three people to water ski—the boat operator, the water-skier, and the observer. A motorboat operator must be accompanied by an observer to watch the skier and to relay signals to the driver. If the boat operator is under 13 years of age, the observer must be at least 18.

Waterskiing is allowed only from sunrise to sunset.

Water-skiers must wear a Coast Guard-approved personal flotation device (PFD), better known as a life jacket. Don't use ski belts; they are not acceptable flotation devices.

- **Personal Watercraft (Jet Skis)**

Personal watercraft, also known as jet skis, wave runners, or thrill craft, are considered motorboats and must comply with all boating laws.

If you are operating a personal watercraft or if you are a passenger, then you must wear a PFD.

If your personal watercraft is equipped with an engine cut-off cord, you must attach that cord to your clothing, body, or PFD. If you should fall off while riding, the cord will disconnect from the craft, shutting off the engine.

- **Prohibited Operation**

It's against the law to throw garbage, refuse, waste, or sewage into lakes or rivers. If you pack it in, pack it out.

Never operate a boat or personal watercraft in a manner that would endanger someone's life or property. Prohibited activities include weaving through congested vessel traffic, jumping the wake of another boat, following directly behind a water-skier, speeding in confined or restricted areas, and buzzing or wetting down others.

- **Noise**

Show consideration for others by controlling the noise your motorboat produces. All motorboats must be able to muffle noise to 90 decibels or less when measured one meter (about three feet) from the muffler at idle speed.

If you'll be recreating on Flathead, Swan, or Echo lakes this summer, be aware that more restrictive noise limitations are in effect. All boats on these lakes must operate so the noise reaching the shoreline does not exceed 75 decibels.

Boat operators can reduce noise by: (1) maintaining an effective muffler on boats with above-water exhausts; (2) increasing the distance between the boat and the shoreline; (3) decreasing engine rpm; and (4) reducing the trim angle of the engine or drive.

The National Marine Manufacturers Association recommends

traveling at a no-wake speed until you are about 200 feet from the shoreline.

For more information about boating in Montana or for a copy of current boating laws, contact any Fish, Wildlife & Parks office.—*Liz Lodman, coordinator, Recreational Vehicle Safety Program, Conservation Education Division, Helena*

License Fees Increase

With the beginning of a new hunting and fishing license year on March 1, 1992, many of Montana's license fees increased.

With existing revenues, it was evident two years ago that by 1992 the Department of Fish, Wildlife & Parks would face a budget shortfall for its fish and wildlife programs.

A great deal of staff and Fish, Wildlife & Parks Commission time went into discussions on how best to address the foreseen shortfalls in the budget. The department also conducted a series of public open houses throughout the state to present several options that FW&P staff felt could help the agency balance its budget through 1997. In all discussions, potential increases in non-resident license fees were mentioned. But the bulk of the discussions centered on resident license fees, which had not been raised since 1983 and which represent the vast majority of the licenses FW&P sells.

Based on public comment received at the open houses and from other sources, the department selected a phased-in increase in the cost of certain resident and non-resident license fees as the most reasonable and publicly acceptable way to address the projected shortfall. FW&P subsequently submitted a request for proposed license fee increases to the 1991 Legislature for consideration.

In passing Senate Bill 171, the 1991 Legislature authorized *phased in increases* in both resident and non-resident hunting and fishing licenses in 1992 and 1994. The schedule for those increases appears below:

The fee increase will help to fund and support:

- fish stocking in lakes;
- game warden activity, including undercover operations;
- block management expansion to gain more public access to private lands;
- weed control and fence, road, fishing access site, and boat landing maintenance on FW&P lands;
- timely big game and fish surveys to assure properly set seasons and harvest quotas for sound management and equitable hunting and fishing opportunities; and
- information and education activities throughout the state.

FW&P's role centers on conserving the state's wildlife and fisheries resources and every project undertaken requires funding. The new fee schedule provides department staff with the opportunity to ensure that necessary, important work will, in fact, get done and that those services which sportsmen and the general public have come to expect from FW&P will continue.

License Name	Current	March 1, 1992	March 1, 1994
RESIDENT			
Antelope	$ 6.00	$ 9.00	$ 11.00
Black Bear	8.00	11.00	15.00
Conservation	2.00	4.00	4.00
Elk	10.00	13.00	16.00
Deer A	9.00	11.00	13.00
Deer B	6.00	7.00	8.00
Fishing	9.50	11.00	13.00
Goat	50.00	60.00	75.00
Moose	50.00	60.00	75.00
Mountain Lion	10.00	13.00	15.00
Paddlefish	3.00	4.00	5.00
Sheep	50.00	60.00	75.00
Sportsman	45.50	54.00	64.00
Turkey	3.00	4.00	5.00
NONRESIDENT			
Antelope	120.00	145.00	150.00
Bird	53.00	55.00	55.00
Conservation	2.00	5.00	5.00
Deer Combo	200.00	238.00	245.00
Deer Combo, Outfitter	200.00	248.00	250.00
Deer Combo, Landowner	200.00	248.00	250.00
Elk Combo	450.00	462.00	475.00
Elk Combo, Outfitter	450.00	472.00	485.00
Fish, 2 day	8.00	10.00	10.00
Fish, Season	36.00	40.00	45.00
Goat	320.00	450.00	475.00
Moose	320.00	450.00	475.00
Paddlefish	10.00	15.00	15.00
Sheep	320.00	450.00	475.00
BOTH			
Drawing Fee	2.00	3.00	3.00
Elk Permit	0.00	2.00	3.00
Archery	7.00	8.00	8.00

Tribute to Howard Bailey

I keep fish in Bailey's Reservoir and try to manage what moves under the water, but everyone knows it's Howard's pond.

Seventy surface acres when full—he dreamed it, built it, coddled it, and kept it, not for himself, but for anyone who might want to picnic and catch a mess of fish. Howard was always dreaming of ways to make things easier for the folks who freely used the reservoir. A shelter over here or an outhouse there. "Have to keep the grass mowed where people might park their lawn chairs. Keeps the snakes back where

Howard Bailey

they belong and puts the fire danger down," he would say.

Howard treasured the reservoir about as much as he treasured the people who came to use it. He always ran around like a mother hen making sure everybody was okay and to see if they'd caught some fish.

I'm sure that's what he was doing on his "quad-mule" in January when he went through the ice near a pressure ridge and drowned. Howard was my friend, but then, he was everybody's. He always looked for the good in people. He believed strongly that you reap what you sow, and he spent his life sowing good seed which we'll all continue to harvest.—*Kent Gilge, Region Six (Glasgow) fisheries biologist*

Remembering Ray Doig

The Montana Department of Fish, Wildlife & Parks lost a friend on January 23, 1992. Ray Doig's enthusiasm and optimism will be remembered by all who knew him.

Ray Doig

He willingly initiated and contributed to local fish and wildlife projects. He served as a needed catalyst in these efforts and proved invaluable in his ability to positively involve the entire community of Townsend.

Such efforts in the responsible management of Montana's renowned fish and wildlife resources set a high standard of public service for future generations to follow.—*Bruce Rehwinkel, Ron Spoon, Fisheries Division*

Montana State Parks Calendar

MAY

23-25—Memorial Day Weekend

Why not spend the weekend camping at one of Montana's state parks?

JUNE

6 and 7—Smallmouth Bass Tournament, Hell Creek State Park

27 and 28—Lewis and Clark Festival, Giant Springs State Park

A variety of historical activities for all ages. Plays, a buffalo roast, portage run, and more.

28—Roe River Day, Giant Springs State Park

A day of activities for kids.

JULY

4—Fort Owen Day, Fort Owen State Park

Ceremony and celebration to commemorate Montana's first permanent white settlement in 1841.

18 and 19—Bannack Days, Bannack State Park

Return to the Territorial capital as it was a hundred years ago. Stagecoach rides, soap-making, main street gun fights, old-time dancing, lots of music, and good times for the whole family.

25 and 26—Walleye Tournament, Hell Creek State Park

Catch the biggest and best walleye in Montana. Tournament is limited to 100, two-person teams. Fills early!

AUGUST

8 and 9—Discovery Days, Lewis and Clark Caverns

Reunion of Civilian Conservation Corps members and former caverns employees for the anniversary of the caverns. Potluck picnic, tours, history. A two-day celebration of the discovery of the cave.

22—Kids' Day, Spring Meadow Lake State Park

One last day of fun before school starts. Food, fun, and prizes for kids.

23—Senior Day, Spring Meadow Lake State Park

A day of activities for all senior adults. Free food and prizes.

SEPTEMBER

20-26—Native American Awareness Week, Chief Plenty Coups State Park

Various activities for all ages focusing on Native American culture, history, and dress.

OCTOBER

Off-season camping fees now in effect

Cost is $4 per night with a State Park Passport.

NOVEMBER

Eagle watch, Canyon Ferry State Park, Riverside

Mid-November through mid-December, view the majestic bald eagles as they flock to this area to feed on spawning kokanee salmon.

IDENTIFICATION OF MONTANA'S FURBEARING MAMMALS

by MICHAEL R. FRISINA and KURT L. ALT
illustrations by ROBERT NEAVES

Fur animals have long influenced human culture and survival. Native Americans utilized furbearing animals for meat and the insulating qualities of their pelts as protection from the cold Montana winters. Fur animals like the wolverine were considered spiritually powerful. In about the year 1500, Europeans began to impact the development of North America through establishment of the fur trade industry. The fur trade, especially the beaver trade era (1550 to 1840), played an important part in the exploration and economic development of North America. The fur trade preceded and opened the way for the mining, forestry, and agricultural frontiers of Montana. Today Montanans value these animals for their fur and also consider them an important resource for wildlife viewing and general enjoyment.

The following is a guide to help you identify the furbearing animals of Montana. Included are the nine official Montana furbearers for which annual harvest seasons are established, six predators, and two nongame species. The black bear and mountain lion were included in an earlier *Montana Outdoors* guide, "Identification of Montana's Big Game Mammals."

NORTH AMERICAN BADGER
Taxidea taxus

STATUS: Sporadic and limited importance to the fur market. Abundant. Unprotected predator.

IDENTIFYING CHARACTERISTICS: Remarkably adapted morphologically for burrowing and feeding on burrowing prey. A stout, compact, heavy-bodied animal built low to the ground, with partially webbed toes and long claws to aid in digging. It is the only true fossorial carnivore in North America and thus unique in appearance. A yellowish-gray mammal with a white stripe over the top of its head, white cheeks, black feet, and a black spot in front of each ear. The belly and short tail are yellowish. Pelage is composed of underfur with longer guard hairs. Because of their shaggy coat and short stature, badgers appear to flow along the ground. Total length: 22 to 28 inches. Weight: 13 to 25 pounds.

HABITAT: Prefers open grasslands, shrub/grasslands, and deserts. Non-forested habitats with soils suitable for burrowing and support of fossorial prey are favored.

FOOD HABITS: Very efficient predator of fossorial and semifossorial prey. However, an opportunistic feeder and supplements its diet with a variety of mammals, birds, eggs, reptiles, amphibians, and plants.

LIFE HISTORY: Mostly nocturnal, but also active during the day. Efficient digger, digs out small rodents. Dens in burrows of its own making. Breeds from May through August; delayed implantation; young born February to May; litter size ranges from one to four.

BOBCAT

Felis rufus

OTHER NAMES: Bay lynx, barred bobcat, catamount, cat of the mountains, lynx cat, pallid bobcat, red lynx, wildcat.

STATUS: Very valuable fur animal. Official Montana furbearer managed and protected by regulated fur harvest seasons.

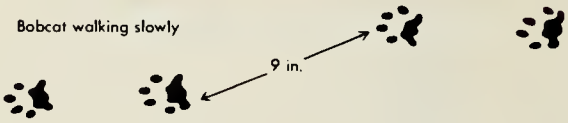
IDENTIFYING CHARACTERISTICS: The bobcat is about twice the size of a domestic cat and is the smallest of our native cats. Individuals exhibit considerable variation in color. Base coloration can be light gray, yellowish-brown, buff, brown, or reddish-brown. Underparts and inside of legs are white with black or dark brown spots. Facial fur is often streaked with black. Dorsal surfaces of the ears are black with a prominent white spot. Short tuft of black hair is present on the ears. This cat has a short tail, black only on the upper portion of the tip. Bobcat fur is short, dense, and soft. Retractile claws. Total length: 28 to 37 inches. Weight: 15 to 35 pounds.

HABITAT: Utilizes wide variety of habitats; known to be an animal of "patchy" country. Prefers rimrock and grassland/shrubland areas. Often found in areas with dense understory vegetation and high prey densities. Natural rocky areas are preferred den sites.

FOOD HABITS: Snowshoe hares and jackrabbits are the most common prey. Also feeds heavily on medium-sized rodents. Will eat carrion.

LIFE HISTORY: May be active during all hours but is primarily nocturnal. Solitary animal that is difficult to observe in the wild. Usually mates during spring. Litter size averages from two to four. Gestation 50 to 60 days. Young born May through June.

SIMILAR SPECIES: Lynx—bobcat feet are much smaller than those of the lynx. Feet lack large furry pads characteristic of lynx. Also have shorter legs than lynx. Lynx has black color all the way around the tail tip. Other cats—have a long tail.



Lynx
Felis lynx

STATUS: Internationally important component of the wild fur industry. Very valuable fur animal. Official Montana furbearer managed and protected by regulated fur harvest seasons.

IDENTIFYING CHARACTERISTICS: Noticeably larger than the bobcat. This medium-sized cat has large feet and long legs in proportion to its body size. A very short tail. Winter pelage is a grizzled grayish-brown mixed with buff or pale brown. The belly, legs, and feet are grayish-white or buff white. The light fur of the underparts makes lynx pelts so valuable. Very broad paws produce a snowshoelike effect that enables the animal to traverse deep snow easily. Dense fur tends to exaggerate body size. Total length: 28 to 37 inches. Weight: approximately 35 pounds.

HABITAT: Forested areas, swamps. Habitat selection of lynx is not well understood. Presumably good snowshoe hare habitat is good lynx habitat. Snowshoe hares prefer diverse forest with alternate stands of conifer cover and shrubby openings for feeding. Lynx is a species of the heavy forest.

FOOD HABITS: Lynx feed almost entirely on snowshoe hares. Other foods include mice, squirrels, and grouse. Only snowshoe hares can support high-density lynx populations.

LIFE HISTORY: Primarily nocturnal and solitary. Secretive and difficult to observe in the wild. Mates during spring; young are born during May and June after a 62-day gestation. Litter size is from one to four and averages two. Dens in hollow logs, beneath roots, and other sheltered places. The near total dependency on snowshoe hares for food has locked lynx populations into the snowshoe hare life cycle.

SIMILAR SPECIES: Bobcat—paws are much larger and legs longer than bobcat. Lynx has a lighter, less spotted, pelage. Tip of the tail on the lynx is all black. Lynx has long tufts of hair on the ear tips. Black fur on the back of the lower hind legs of the bobcat contrasts with the lighter beige fur of the lynx.

Short-Tail Weasel
Mustela erminea

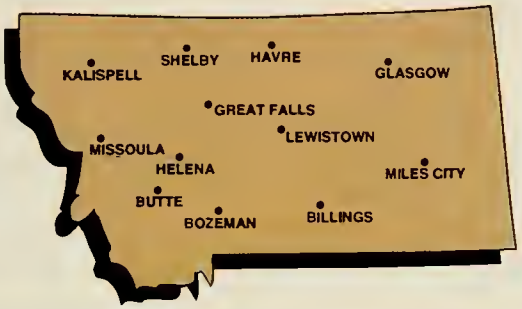
OTHER NAMES: Ermine, stoat.
STATUS: Winter pelts of value when fur prices are high. Unprotected predator.
IDENTIFYING CHARACTERISTICS: Of the three North American weasels is intermediate in size and one of the smallest carnivores in the world. Males distinctly larger than females. During summer fur is dark brown with white underparts, white feet, and white line down hind legs. Molts to white during winter, except black tip on tail. Total length: seven to 13 inches. Weight: one to six ounces.
HABITAT: Inhabits brushy or wooded areas, usually not far from water. Tends to avoid dense forests. Prefers areas with high densities of small mammals. Most abundant in ecotones.
FOOD HABITS: Although short-tail weasels prey on a variety of small mammals and birds, they specialize in hunting voles.
LIFE HISTORY: Mostly nocturnal but will hunt during the day. Active throughout the year. Dens in ground burrows, under stumps, rock piles, or old buildings. Breeds during summer; 8.5- to 10-month gestation; delayed implantation; young born April or May; one litter per year of four to 13 young.
SIMILAR SPECIES: Long-tail weasel—larger, tail longer. Least weasel—smaller, short tail, no black tip on tail. Mink—larger, uniform color.

Long-Tail Weasel
Mustela frenata

STATUS: Fur of some value, unprotected predator.
IDENTIFYING CHARACTERISTICS: Largest and most widely distributed of the three North American weasels. Distinguished by its long, slender body and long neck. Longest tail of the North American weasels. During summer fur rich brown on the back and sides with yellowish-white underparts, black tip on tail, and no whitish line down inside of leg. Acquires a white winter coat. Adult males noticeably larger than females. Total length: 11 to 16.5 inches. Weight: three to 12 ounces.
HABITAT: Found in almost all land habitats near water. Has the broadest ecological and geographical range of the North American weasels. Prefers areas with abundant prey. Avoids dense forest, most abundant in late seral ecotones.
FOOD HABITS: More of a generalist than the short-tailed and least weasels. Feeds mostly on small mammals up to rabbit-sized, but eats birds and other animals as well.

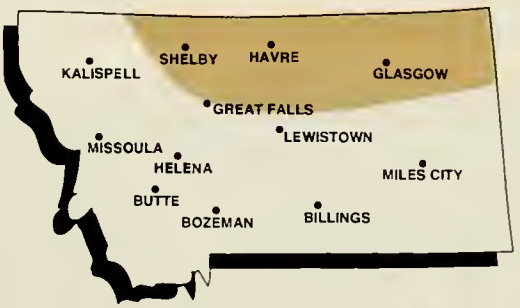
Standing on hind legs at immediate right is a long-tail weasel; behind it is a least weasel. At far right, a short-tail weasel is shown in winter (above) and summer pelage.

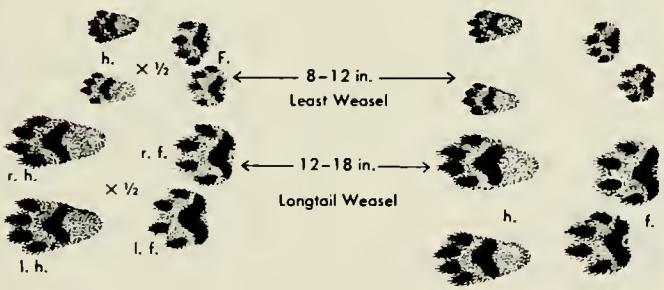
LIFE HISTORY: Primarily nocturnal, but sometimes active during the day. Quite fearless and curious. Mainly terrestrial but can climb and swim well. Nests in old burrows of other animals. Mates during summer; 205- to 337-day gestation; delayed implantation; young born during April; litter size four to nine.
SIMILAR SPECIES: Short-tail weasel—white line down inside of leg, smaller. Least weasel—no black tip on tail, smaller. Mink—nearly uniform dark brown. Marten—heavier, much larger.



LEAST WEASEL
Mustela nivalis

STATUS: Unprotected predator.
IDENTIFYING CHARACTERISTICS: The smallest weasel and smallest carnivore in North America. Similar to other weasels in color and body form. Males are larger than females. Fur is brown above and whitish below during summer. Entirely white during winter. No black tip at end of short tail. Total length: less than 10 inches. Weight: one to three ounces.
HABITAT: Variety of habitats, including meadows, fields, brushy areas, and open woods. Avoids dense forest, prefers ecotones. Abundance of small mammals is important in determining the local distribution of least weasels.
FOOD HABITS: Feeds almost entirely on mice. Small enough to pursue rodents into runways, burrows, and nest chambers.
LIFE HISTORY: Most active at night. With abundant food sometimes produces more than one litter per year. Breeds year round; young born any time of the year; delayed implantation does not occur; litter size usually four to five.
SIMILAR SPECIES: Much smaller than the short- or long-tailed weasel. Both short- and long-tailed weasels have black tip on tail.





FISHER

Martes pennanti

OTHER NAMES: Black cat, fisher cat, pekan, atchok or oochik, Wejack.

STATUS: Valued fur animal. Official Montana furbearer managed and protected by regulated fur harvest seasons.

IDENTIFYING CHARACTERISTICS: Long, slender body with a typical "weasel" shape. A well-furred tail comprises about one-third of the animal's total length. Pointed face, rounded ears, short legs. Fur is usually black on tail, legs, and rump. Fur on head and shoulders may have a grizzled appearance resulting from tri-colored guard hairs. White patches are common around the genital area and in the axillae of the forelegs. Both males and females have paired scent glands which are used for scent-marking territories. Total length: 23 to 40 inches. Weight: three to 12 pounds.

HABITAT: Inhabits closed canopy, mature to old-growth coniferous and deciduous forest. Availability of food is an important habitat component. Severe and extensive disturbance of the forest can substantially reduce habitat value. Large deciduous trees are often used as maternal den sites.

FOOD HABITS: Prey items are animals associated with the coniferous forest. Will also consume carrion and plant materials. Snowshoe hares, mice, squirrels, shrews, and birds are staple foods. Famous for ability to prey on porcupines.

LIFE HISTORY: Active during both day and night. Most hunting takes place on the ground. Most females breed for the first time at 12 months and produce their first litter at 24 months. Breeds during March and April. Produces one litter of about three young per year.

SIMILAR SPECIES: Marten—smaller, buffy patch on throat and breast. Wolverine—has yellowish stripes on sides and rump. Red fox—has a white tip on tail.

WOLVERINE

Gulo gulo

OTHER NAMES: Devil bear, carcajou, skunk bear, devil beast.

STATUS: Wolverine fur is highly valued and widely used in the Arctic and sub-Arctic as ruffs or trim on parkas and other garments. The most viable and widespread population of wolverines in the contiguous 48 states occurs in the Rocky Mountains of Montana. Official Montana furbearer managed and protected by regulated fur harvest seasons.

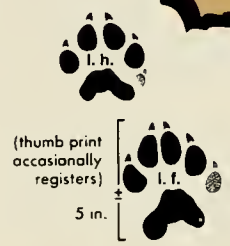
IDENTIFYING CHARACTERISTICS: Except for its bushy tail, the wolverine looks like a small bear. Compact and strongly built. Medium brown to almost black in color. Color is paler on the head; two broad, yellowish stripes that start at shoulders and join on rump. Often displays white or light tan patch markings on the throat and chest. Feet are large in relation to size of body. Largest terrestrial member of the weasel family. Total length: 31 to 51 inches. Weight: 35 to 60 pounds.

HABITAT: The primary wolverine habitat in Montana is the coniferous forest types of the Rocky Mountains. Wilderness is an essential habitat component. Requires large areas to roam over in solitude. Mainly animals of the heavy forest.

FOOD HABITS: A very opportunistic feeder. Generally a carnivore, will also feed on meat carrion and berries. Famous for robbing traps and food caches of trappers. When necessary, can kill animals many times its own size.

LIFE HISTORY: Active day or night. Except for the breeding season exhibits solitary habits. General behavior is similar to other mustelid predators. Dens in any sheltered place. Breeds during summer; litters of from one to five young are born between February and April. Exhibits delayed implantation of the fertilized egg.

SIMILAR SPECIES: Fisher—no yellowish body stripes.



MINK

Mustela vison

STATUS: This valuable furbearer is one of the most widespread carnivores in North America. Official Montana furbearer managed and protected by regulated fur harvest seasons.

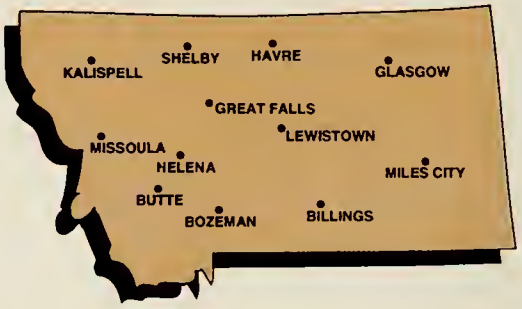
IDENTIFYING CHARACTERISTICS: This medium-sized, semiaquatic carnivore has a long, thin body; short, sturdy legs; short, pointed nose; short, rounded ears, and a dorsoventrally flattened head. Thickly furred tail. Usually rich dark brown in color with a white chin patch. Sometimes white spots on belly. Fur is soft and lustrous with long, glossy guard hairs. Dense pelage is its only obvious aquatic adaptation. Total length: 19 to 28 inches. Weight: 1.5 to two pounds.

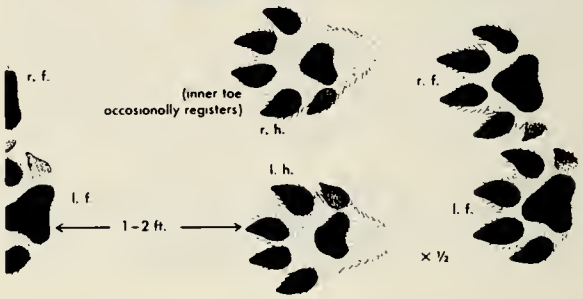
HABITAT: Usually found along streams and lakes. Commonly occurs in marshes and beaver ponds. Permanence of water and dependable source of food are most important habitat components. Often uses den sites of other animals and is commonly found in association with muskrats.

FOOD HABITS: Preys primarily on small mammals, birds, eggs, frogs, and fish. Its diet is almost entirely animal. During summer preys on waterfowl.

LIFE HISTORY: Semiaquatic forager. Can kill prey larger than itself. Chiefly nocturnal, territorial, and secretive. Dens underneath piles of brush or driftwood, under rocks, in hollow logs, and in houses or dens abandoned by beavers or muskrats. Very aggressive mating behavior. Mates from January through March; 40- to 79-day gestation; delayed implantation; young born during April or May; averages four or five per litter.

SIMILAR SPECIES: Weasel—has white or yellow underparts. Marten—has buffy patch on throat and breast. River otter—much larger.





MARTEN

Martes americana

OTHER NAMES: American marten, pussy marten, pine marten, American sable.

STATUS: Valuable fur animal. Lives in areas remote from civilization. Official Montana furbearer managed and protected by regulated fur harvest seasons.

IDENTIFYING CHARACTERISTICS: This house cat-sized animal is distinctly weasel-like in appearance. Has short legs, prominent ears, pointed face, and a well-furred tail constituting one-third of its total length. Stiff glossy guard hairs with dense silky underfur. The soft, dense, yellowish-brown fur shades to dark brown on its bushy tail and legs. Pale buff to orange patch on throat and breast. Has ability to rotate hind limbs to enable descending trees head first. Total length: 21 to 26 inches. Weight: 1.5 to 2.75 pounds.

HABITAT: Primarily a boreal animal preferring mature conifer or mixed wood forests. Severe forest disturbance can significantly reduce habitat value. Uses deadfall and snags as den sites.

FOOD HABITS: Eats a variety of animal and plant materials associated with the mature forest. Is an opportunistic feeder that primarily feeds on a variety of small mammals.

LIFE HISTORY: Spends most of its time in the trees and is primarily noctumal. Dens in hollow logs and trees. Mates during summer with young born during April. Exhibits delayed implantation and an eight- to nine-month gestation. Average litter size is two to four.

SIMILAR SPECIES: Mink—has white patch on chin. Fisher—larger, dark brown, grizzled head and back. Red fox—white tip on tail.

Red Fox

Vulpes vulpes

STATUS: Valuable fur animal, abundant, unprotected predator.

IDENTIFYING CHARACTERISTICS: Appearance of small dog. Long, bushy tail, pointed ears, slender muzzle, slanted eyes. White tip on the tail. Rufous coloration, various coat colorations or color phases. Total length: 39 to 43 inches. Weight: 10 to 15 pounds.

HABITAT: Can survive in a wide range of habitats. Often associated with agricultural areas. Prefers mixture of forest and open country near water.

FOOD HABITS: Opportunistic predator that sometimes eats carrion. Preys on small mammals, birds, eggs, game birds.

LIFE HISTORY: Mostly nocturnal. Hunts by smell. Uses dens for shelter during severe weather and when pups are being reared. Usually uses dens made by other animals. Mates during winter; 51- to 53-day gestation; litter size averages four to eight.

SIMILAR SPECIES: There is no white tip on the tail of the coyote, swift fox, marten, or fisher.

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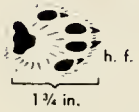
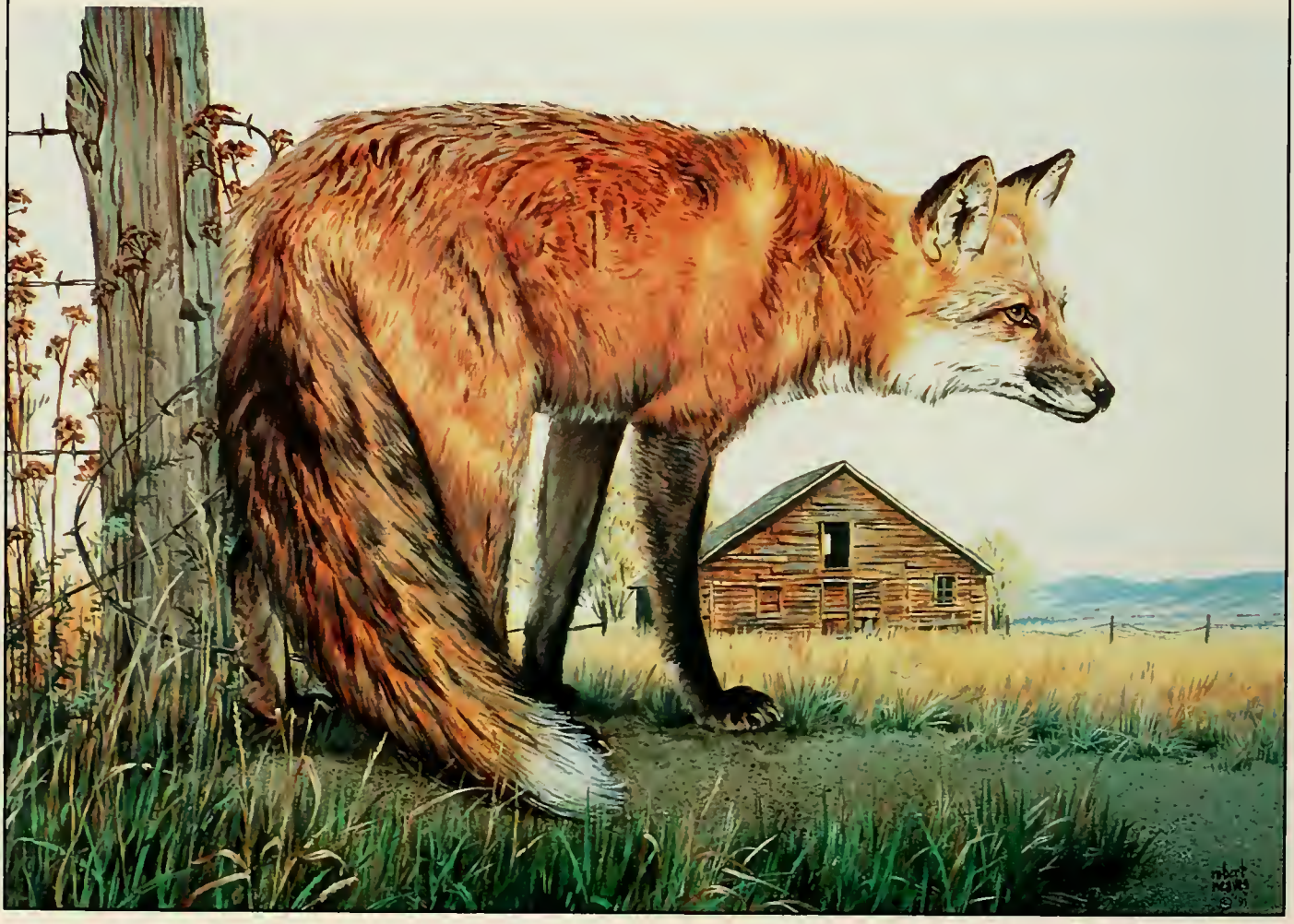




COYOTE
Canis latrans

STATUS: Valuable fur animal. Abundant. Unprotected predator.

IDENTIFYING CHARACTERISTICS: Like a medium-sized dog in appearance. Nose more pointed and tail bushier than most dogs. Larger than the red fox and much smaller than a wolf. Tail held down between legs when running. Long, dense fur. Pelt gray or reddish-gray, with rusty legs, feet, and ears. Throat and belly whitish. Total length: 43 to 53 inches. Weight: 30 to 40 pounds.

HABITAT: Utilizes almost any habitat, including urban areas, where prey is readily available. Prefers prairies, open woodlands, brushy or boulder-strewn areas. Coyote abundance is tied to food availability.

FOOD HABITS: Consumes a variety of foods and carrion. Will eat almost anything, plant or animal. Emphasizes small mammals, fawns, plants, birds, and invertebrates. During winter, often preys on deer. Commonly preys on domestic sheep.

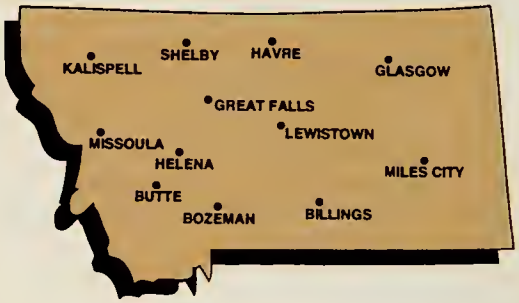
LIFE HISTORY: Mainly nocturnal, true scavenger, territorial. Kills large animals by attacking the throat. Mated pairs usually produce pups each year, and both adults assist in care of the young. Den used for rearing pups. Breeds from January to March; 60 to 63 days gestation; four to seven pups in a typical litter.

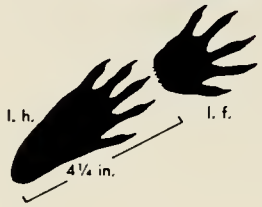
SIMILAR SPECIES: Wolves—larger, hold tail high when running. Red fox—smaller, hold tail out straight when running. Dog, wolf/coyote, coyote/dog, and wolf/dog crosses are also possible.

Raccoon

Procyon lotor

OTHER NAMES: Ringtail, coon.
STATUS: Moderate value as a fur animal. Abundant. Many people enjoy viewing them. Nongame animal.
IDENTIFYING CHARACTERISTICS: Black mask over the eyes and alternating rings of yellowish-white and black on the tail. Flat-footed and body weight variable. Total length: 26 to 40 inches. Weight: 12 to 35 pounds.
HABITAT: Inhabits stream and lake borders near wooded areas or rocky cliffs. Most abundant in riparian and wetland habitats.
FOOD HABITS: Omnivorous, will eat whatever is available. Feeds on carrion, mammals, birds, reptiles, insects, amphibians, grains, nuts, and fruits. Also readily consumes food prepared for animal or human consumption.
LIFE HISTORY: Mostly nocturnal and very intelligent. May use front paws to find food. Sometimes dunks food in water before eating. Does not hibernate. Uses hollow logs, trees, and rock crevices as den sites. Breeds during February and March; 63-day gestation; young born during April or May; litter size is usually two to four.





Striped Skunk

Mustela mephitis

STATUS: Nationally a valuable fur animal. Individual pelts are not very valuable but tremendous numbers are taken. Very abundant nongame animal.

IDENTIFYING CHARACTERISTICS: About the size of a house cat. Well-developed scent glands that emit a very strong odor. Often the presence of a skunk is first detected by its odor. Black body, narrow white stripe on middle of the forehead, broad white area on nape that usually divides into a V at the shoulders. Great variation in color pattern and size of stripes. Total length: 20 to 28 inches. Weight: six to 14 pounds.

HABITAT: Lives in a variety of habitats including semiopen country, mixed woods, brushland, and open prairie. Most abundant in agricultural areas where there is ample food and cover. Usually absent where water table is too high for making ground dens.

FOOD HABITS: An opportunistic, omnivorous, predatory feeder. Consumes mice, insects, eggs, berries, and carrion. Diet varies greatly depending on season and geographic location. From November through April, when food is scarce or unavailable, skunks spend extended periods in their dens.

LIFE HISTORY: Mostly nocturnal and does not hibernate. Uses ground burrows, abandoned building foundations, and wood or rock piles as den sites. Will use dens created by other animals. When frightened or threatened, sprays a strong and long-lasting musk produced by anal scent glands. Mating occurs during February and April; 59 to 77 days gestation; may exhibit delayed implantation; young born during May or June; five to six young is the usual litter size.

SIMILAR SPECIES: A few specimens of the spotted skunk have been captured in Montana. The spotted skunk has a black spot on forehead, one under each ear, and four broken white stripes along neck, back, and sides.

MUSKRAT

Ondatra zibethicus

STATUS: Very abundant. One of the most important fur animals in North America. Can cause damage to dikes by burrowing. Very valuable fur animal. Official Montana furbearer managed and protected by regulated fur harvest seasons.

IDENTIFYING CHARACTERISTICS: Muskrats are large voles adapted to aquatic conditions. The name "muskrat" is related to odoriferous secretions from the perineal glands. The long naked tail flattened laterally distinguishes muskrats from other mammals. Webbed hind feet. Fur is dense and rich brown with a coarse guard hair overlay and thick waterproof underlayer. Color varies from dark brown to black. Total length: 16 to 26 inches. Weight: two to four pounds.

HABITAT: The most widespread of North American microtine (a subfamily of mice) rodents. Marshes, edges of ponds, lakes, streams, cattails, and rushes are typical habitats. An essential habitat ingredient is water of sufficient depth or velocity to prevent freezing. The presence of herbaceous vegetation, both aquatic and terrestrial, is another essential ingredient. In general, has very flexible habitat requirements and often coexists in habitats used by beavers.

FOOD HABITS: Primarily herbivorous and will eat virtually any vegetable matter. Utilizes shoots, roots, bulbs, and leaves of aquatic plants. Cattails and bulrush are preferred foods. Will also consume cultivated crops. On occasion will eat animal matter. Food is stored in the burrow or den and during winter may even eat part of its own lodge.

LIFE HISTORY: May be thought of as overgrown subaquatic vole. Mostly active at night but daytime activity is not unusual. Often builds conspicuous dome-shaped houses. Breeds during spring and summer. Five or six young are born after a 22- to 30-day gestation. May have two or three litters per year.

SIMILAR SPECIES: Beaver—has large dorsally flattened scale over tail.

North American Beaver

Castor canadensis

STATUS: An abundant, important fur animal and water conservationist. Its value as a fur animal was responsible for much of the early exploration of North America. Is one of the most intensively studied furbearers in North America. Official Montana furbearer managed and protected by regulated fur harvest seasons.

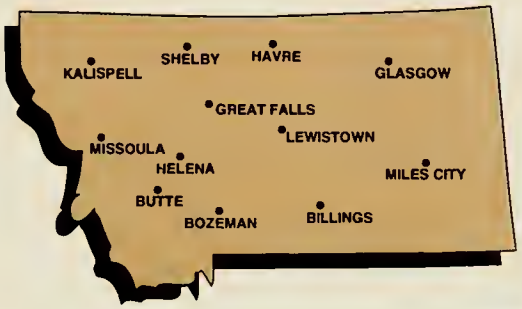
IDENTIFYING CHARACTERISTICS: The largest rodent in North America north of Panama. On land is a large, clumsy, hump-backed animal. In the water, becomes sleek and torpedo-shaped. Propels itself with powerful webbed hind feet. Beavers use their large dorsally flattened, scale-covered tail to maneuver in water. Slapping the tail on water surface is used as a signal of alarm. Split nail on the second hind toe is used for grooming. Incisors are large and continually growing. Fur is rich brown with black to reddish guard hairs. Underfur is soft and extremely dense with excellent insulating qualities. Both sexes have a pair of anal glands and castor sacs located ventrally. Beavers emit anal gland secretions year round. Total length: 34 to 40 inches. Weight: 30 to 60 pounds.

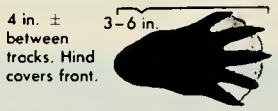
HABITAT: Occupies a wide variety of habitats in North America. Water and associated woody vegetation are the most essential components of beaver habitat. Ideal beaver living sites include ponds, small lakes, meandering streams, and rivers.

FOOD HABITS: Beavers are strict herbivores. Beavers eat a variety of woody and herbaceous species. Willows, mountain alder, and aspen are important foods. Will also consume herbaceous vegetation during summer. Much of the woody vegetation beavers cut is not used for food. Caches woody vegetation near shore for winter food.

LIFE HISTORY: Builds stick and mud dams across streams. Mostly nocturnal. May build large conical houses at the edge of a lake or burrow into the bank for a den along rivers. Beaver life is based on a family unit consisting of a pair of adults, yearlings, and kits. Breeds from January through March. Two to four young are born after a 105- to 107-day gestation period. One litter per year is produced. Two-year-olds are eventually driven from or leave the parental home.

SIMILAR SPECIES: River otter—tail covered with fur. Muskrat—smaller, tail slender.





North American River Otter

Lutra canadensis

STATUS: Fur is of moderate value. Official Montana furbearer managed and protected by regulated fur harvest seasons.

IDENTIFYING CHARACTERISTICS: Large, weasel-like, torpedo-shaped, aquatic mammal with a long, round tail. Thickset but streamlined body supported by short, powerful legs. Long stiff facial whiskers located behind and below the nose. Small ears, broad snout, and webbed feet. Body is a rich brown above with a silvery sheen below. The pelt consists of a dense underfur protected by longer stiff guard hairs. Total length: 35 to 54 inches. Weight: 11 to 33 pounds.

HABITAT: Inhabits streams, rivers, and lake borders. Riparian vegetation is a key component of otter habitat. Otters often use bank dens first created by beavers. Availability of food, water, and shelter determine the duration and intensity of habitat use.

FOOD HABITS: The otter diet is primarily fish, but it will consume a variety of aquatic prey.

LIFE HISTORY: Active both day and night. One of the most aquatic members of the weasel family. Sociable animal that dens in banks with entrance below water. Breeds during spring; 9.5- to 10-month gestation; delayed implantation; litter size of two to three is most common.

SIMILAR SPECIES: Beaver—has a flat, scaly tail. Mink—much smaller, feet not webbed.

The primary reference sources for development of text for this identification guide were: "Wild Furbearer Management and Conservation in North America" (edited by Novak *et al.*, Ontario Ministry of Agriculture, 1987); "Rocky Mountain Mammals," (Armstrong, Colorado Associated University Press, 1987); and "A Field Guide to the Mammals" (Burt and Grossenheider, Houghton Mifflin Company, 1976). These references are recommended as sources for more detailed information regarding the lives and habits of Montana's fascinating furbearing mammals.

THANKS FOR "CROSSING THE BARRIERS"

I really enjoyed William Phippen's article, "Crossing the Barriers," in your March/April 1992 issue. This article meant much to me as I am handicapped and miss being able to participate in many outdoor sports.

Before an accident in 1988, I visited Montana yearly to participate in hunting and enjoyed it very much. Your magazine is very interesting to me, and I look forward to each issue.

South Carolina could take some pointers from you in making recreation more accessible to the handicapped. Even parking for the handicapped is not enforced. Persons who are not handicapped use the parking spaces and the handicapped have to walk long distances to shop or to do other errands.

Thanks again for your timely article.—*Morris Whisenant; Gaffney, South Carolina*

THE AWAKENING OF HOLTER

Winter has gone. Holter Lake is awakening again. After its long rest, boats are churning its choppy waters in search of adventure.

Fishermen "know" just where the lunkers are, be they walleye or rainbow.

Docks are going back into the water as cabin owners open their vacation homes. The excitement of seeing familiar surroundings again, the anticipation of renewing old acquaintances makes for a holiday atmosphere for all.

Waters skiers don wet suits, too impatient to wait for warmer water and weather.

Campers are pitching their tents, building campfires, braving those freezing mornings with a steaming hot cup of coffee, proclaiming this is as good as it gets.

Boaters race to the Gates of the Mountains to drink in its beauty. Who among us does not look with excitement, hoping to be the first to see a bighorn sheep or a mountain goat.

We still can see some evidence of the fire and we realize how fragile our summer playhouse is.

Holter Lake—bring on your summer because we're sure ready for you. How great it is to live in Montana!—*Don Surface, Great Falls*

DID SOMEBODY GOOF—NO PRONGHORNS!

I was excited about receiving the January/February 1992 issue of *Montana Outdoors*, the Special Photo Issue.

There was one photograph of everything from grizzly bears to a milkweed beetle and most things in between. But not one photo of a "Montana antelope."

I'm a native of Montana and love those little critters. I visit Montana several times each year and enjoy all your wildlife. But I was disappointed not to find a pronghorn in your photo issue. Did somebody goof?—*Duane Krosch; Moses Lake, Washington*

• *We're sorry we weren't able to include a pronghorn in this year's Special Photo Issue—it certainly wasn't on purpose, because we share your affection for antelope. In fact, we featured* two *pronghorns on the cover of last year's Special Photo Issue. We'll try to do better next year!*—Editor

RACCOONS, FOXES, AND PHEASANTS

I'm writing about the article in the September/October 1991 issue of *Montana Outdoors*, "The Great Montana Chicken Ranch" by Tom Hinz.

Of course, big areas of Montana have almost no grouse, pheasants, etc. remaining. Of course, it doesn't take a scientific study to confirm the obvious.

I have lived in central Montana since 1925. My parents came here in 1917. The predators we had to put up with were coyotes, skunks, weasels, and badgers. I don't know who brought in raccoons and foxes, but they are certainly here now. Farmers and ranchers do not even try to raise domestic chickens any more.

I saw my first fox in the late 1970s and raccoons soon after that. Do you know what a family of raccoons can do to any kind of bird?

Raccoons, coyotes and foxes are really multiplying, as no other animal bothers them. I'm afraid the pheasant is an endangered species, or will be in a few years.—*Sherry Arntzen, Hilger*

• *You're right, raccoons and red foxes have increased their distribution in Montana over the past several decades. In fact, raccoons were virtually unknown here 50 years ago; by 20 years ago, they were documented throughout the state. Both foxes and raccoons have natural enemies; foxes are preyed upon by golden eagles, coyotes, lynx, bobcats, and cougars, while raccoons are eaten by foxes, coyotes, bobcats, and cougars. Locally and temporarily, predators may have an impact on upland game bird populations; large areas of quality habitat, however, allow birds to flourish in the presence of predators.*—Editor

READERS LOVE THE PHOTO ISSUE

I have just completely reviewed your Special Photo Issue. In my opinion, this is the finest collection of wildlife and scenic photos I have ever seen.

I feel this one issue is worth the year's subscription price!—*Jack K. Fletcher, Whitefish*

* * * * *

We have been absolutely delighted with your January/February magazine of special photos. They are fantastic!

Being a lover of Montana, I also loved the bits of verse from various Montana songs. Question: Do you know of any tapes with either an individual or a group singing these songs. If so, please let me know where I could procure such tapes. They would be great for Montana programs.—*Ruth Fast, Bigfork*

• *We know of no such tapes and suggest you try garage sales or stores selling used records or tapes. The Historical Society Library in Helena has a "Montana Music" file with copies of sheet music for some of the songs used in our January/February issue.*—Editor

ILLUSTRATION BY DIANA HAKER

A World-Class Rainbow for Stan Ross

MONTANA GROWS world-class rainbow trout. Just ask **Stan Ross.**

Ross, who lives in Kalispell, was pretty excited on December 8 when he took a 29.02-pound rainbow from the Kootenai River about half a mile below Libby Dam. He said it took him about 15 minutes to land the big fish. He found out soon after that his fish had broken Montana's previous record, set on August 22 with a 22-pounder caught in Bitteroot Lake by **Dave Larson**, also of Kalispell. But the really big news came in February when Ross learned that the Freshwater Fishing Hall of Fame had certified his rainbow as a new world record (Division 1, Rod/Reel, 10-Pound and All-Tackle Line Test Class). Ross plans to have his record fish mounted.

The other five records broken in 1991 include those for bigmouth buffalo, Chinook salmon, northern squawfish, tiger muskellunge, and Utah chub. The three new faces on the list belong to the green sunfish, peamouth, and river carpsucker.

John P. Cotton's bigmouth buffalo really WAS big—35 pounds, 8 ounces. Cotton, from Maple Valley, Washington, caught the fish on the Missouri River at Rock Creek Campground. It outweighed the previous record, taken in 1979, by more than three pounds.

We called last year's fishing records update "The Year of the Chinook" because the record for chinook, or king salmon, was broken FOUR TIMES in 1990. The record fell again in 1991 with a 31-pound, 2-ounce fish taken by **Carl L. Niles** of Berkshire, New York. Berkshire's chinook topped the 1990 record by about five pounds. All of last year's contenders and this year's record-breaker were taken from Fort Peck Reservoir.

Stan Ross holds his record 29.02-pound rainbow trout caught from the Kootenai River on December 8, 1991.

Noxon Rapids Reservoir was the place, northern squawfish was the fish, and **Darrel Torgrimson** of Thompson Falls was the lucky angler. His fish weighed 7 pounds, 14 ounces, outdoing the previous record by 10 ounces.

The tiger muskellunge record fell twice in 1991. On July 21, **Mark Fliger** of Billings took a 9.37-pounder out of Lebo Lake. That bested the previous record by almost two pounds. Then on August 24, **Jay Watson**, also of Billings, caught a muskie weighing 11.59 pounds, topping Fliger's fish by more than two pounds. Watson's fish also came from Lebo Lake.

Canyon Ferry Reservoir was home for the 1986 record and it also held the Utah chub that **Jan R. Mack** of Bozeman caught to break the state record. The previous record weighed 1.43 pounds; Mack's fish edged it out at 1.47 pounds.

Making its debut on our list is the green sunfish caught by **Roger Fliger** of Billings at Castle Rock Reservoir on June 19. Fliger's fish weighed a little over half a pound—0.56 pounds.

Another new face was the peamouth, weighing 0.64 pounds. **Gordon Stewart** of Kalispell took the peamouth from Ashley Creek on June 4.

And finally, **James Jessen**, Glendive, added his name and the name of his fish—river carpsucker—to the records with a 3.50-pounder taken from the Yellowstone River near Terry. His lucky day was March 10, 1991.

What do you do if you think you've caught a record fish? First, you must catch the fish legally. Second, your fish should be weighed before witnesses on a government-inspected scale such as those found in most grocery stores. Weigh the fish as soon as possible after catching it. Fish can lose precious ounces—ounces that can spell the difference between a record-breaker and an also-ran. Third, the fish must be positively identified, preferably by a Department of Fish, Wildlife & Parks employee. It's also a good idea to take color photographs of the fish to help resolve any identification problems.

It's still early enough in 1992 to make a resolution: Your name on this list next year.—*Kay Morton Ellerhoff*

MONTANA'S RECORD-SETTING FISH (1991)

SPECIES	WEIGHT	ANGLER	YEAR	LOCATION
Arctic grayling	2 lbs. 10½ ozs.	Steve Houser	1986	Hyalite Reservoir
Bigmouth buffalo*	**35 lbs. 8 ozs.**	**John P. Cotton**	**1991**	**Missouri River (Rock Creek Campground)**
Black bullhead	1 lb. 11 ozs.	Mike Mitchell	1977	Horse Creek (McCone Co.)
Black crappie	3 lbs. 2 ozs.	Al Elser	1973	Tongue River Reservoir
Blue sucker	11.46 lbs.	Doug Askin	1989	Yellowstone River (near Miles City)
Bluegill	2.64 lbs.	Brent Fladmo	1983	Peterson's Stock Dam
Brook trout	9 lbs. 1 oz.	John R. Cook	1940	Lower Two Medicine Lake
Brown trout	29 lbs. 0 ozs.	E.H. "Peck" Bacon	1966	Wade Lake
Bull trout	25 lbs. 10 ozs.	James Hyer	1916	unknown
Burbot (ling)	17.08 lbs.	Jeff E. Iwen	1989	Missouri River (near Wolf Point)
Carp	38 lbs. 8 ozs.	Don Bagley	1986	Eyraud Lakes
Channel catfish	25.89 lbs.	Gordon Wentworth	1984	Fort Peck Reservoir
		Tom Hilderman (tie)	1988	
Chinook (king salmon)*	**31 lbs. 2 ozs.**	**Carl L. Niles**	**1991**	**Fort Peck Reservoir**
Cisco	1.46 lbs.	Jim Liebelt	1990	Dredge Cut Trout Pond
Coho salmon	4 lbs. 14 ozs.	Irven Stohl	1973	Fort Peck Reservoir
Cutthroat trout	16 lbs. 0 ozs.	William D. Sands	1955	Red Eagle Lake
Freshwater drum	20 lbs. 7 ozs.	Richard C. Lee	1987	Fort Peck Reservoir
Golden trout	4 lbs. 8 ozs.	Tom McGillvray	1989	Lightning Lake
Goldeye	2 lbs. 14½ ozs.	Vance "Bubba" Kielb	1989	Irrigation canal (west of Malta)
Green sunfish**	**0.56 lbs.**	**Roger Fliger**	**1991**	**Castle Rock Reservoir**
Kokanee (salmon)	5 lbs. 15 ozs.	Forrest Johnson	1976	Pishkun Reservoir
Lake trout	42 lbs. 0 ozs.	Dave Larson	1979	Flathead Lake (east shore)
Lake whitefish	10 lbs. 0 ozs.	Ruby Mutch	1986	Lower St. Mary Lake
Largemouth bass	8 lbs. 2½ ozs.	Juanita A. Fanning	1984	Milnor Lake
Longnose sucker	3.27 lbs.	Ray Quigley	1988	Marias River
Mountain whitefish	5 lbs. 1½ ozs.	Mervin "Frog" Fenimore	1987	Kootenai River
Northern pike	37 lbs. 8 ozs.	Lance Moyler	1972	Tongue River Reservoir
Northern squawfish*	**7 lbs. 14 ozs.**	**Darrel Torgrimson**	**1991**	**Noxon Rapids Reservoir**
Paddlefish	142 lbs. 8 ozs.	Larry Branstetter	1973	Missouri River
Pallid sturgeon	60 lbs. 0 ozs.	Gene Sattler	1979	Yellowstone River
Peamouth**	**0.64 lbs.**	**Gordon Stewart**	**1991**	**Ashley Creek**
Pumpkinseed	0.95 lbs.	Tim Colver	1985	Milnor Lake
Pygmy whitefish	0.16 lbs.	Orlin Iverson	1982	Ashley Lake
Rainbow trout*	**29.02 lbs.**	**Stanley Ross**	**1991**	**Kootenai River (David Thompson Bridge)**
Rainbow-cutthroat hybrid	30 lbs. 4 ozs.	Pat Kelly	1982	Ashley Lake
River carpsucker**	**3.50 lbs.**	**James Jessen**	**1991**	**Yellowstone River near Terry**
Rock bass	0.57 lbs.	Don Holzheimer	1989	Tongue River Reservoir
Sauger	7.57 lbs.	James Jessen	1990	Yellowstone River
Shorthead redhorse sucker	4.68 lbs.	Ray Quigley	1985	Marias River near Loma
Shortnose gar	3 lbs. 1 oz.	John Johnson	1977	Fort Peck dredge cuts
Shovelnose sturgeon	13.72 lbs.	Sidney L. Storm	1986	Missouri River
Smallmouth bass	6.09 lbs.	Terry L. Druyvestein	1990	Fort Peck Reservoir
Smallmouth buffalo	10 lbs. 4 ozs.	Ron Skirvin	1989	Fort Peck dredge cuts
Stonecat	0.42 lbs.	Robert M. Garwood	1985	Milk River at Havre
Tiger muskellunge*	**11.59 lbs.**	**Jay Watson**	**1991**	**Lebo Lake**
Utah chub*	**1.47 lbs.**	**Jan R. Mack**	**1991**	**Canyon Ferry Reservoir**
Walleye	14 lbs. 14 ozs.	Duane A. Leidholt	1989	Yellowstone River (near Miles City)
White bass	1 lb. 2 ozs.	Ludwig Dubbe	1986	Fort Peck dredge cuts
White crappie	2 lbs. 6 ozs.	Greg Johnston	1990	Tongue River Reservoir
White sturgeon	96 lbs. 0 ozs.	Herb Stout	1968	Kootenai River
White sucker	5 lbs. 5⅓ ozs.	Fred Perry	1983	Nelson Reservoir
Yellow bullhead	0.72 lbs.	Wade Fredenberg	1987	Yellowstone River
Yellow perch	2.37 lbs.	Vernon Schmid	1988	Ashley Lake

***New Montana record for 1991 **New to Montana's record list**

CONTRIBUTORS

• If we polled readers on the most watchable of Montana's "Watchable Wildlife," the great blue heron would probably appear on more than one person's list. As **Jim Keener** writes, "Averaging three feet in height, with a wingspan of about six feet, and weighing between five and eight pounds, the great blue heron...is one of Montana's most noticeable birds." The heron is also a speedy and accurate hunter. When a fish comes within striking distance, the heron pulls its head back and down toward the base of its neck. As Keener suggests, the heron is an "Avian Slingshot" ready for the kill. Keener completed an internship with *Montana Outdoors* last year. He has also completed internships at Spiker Communications and St. Patrick Hospital in Missoula. He and his family have moved to Salt Lake City for career and educational possibilities. Turn to his article on page 2.

* * * * *

• Fascination with the science behind the art—as well as casting all day long and getting nary a nibble—nudged **Cindy W. Vincent** in the direction of fly-fishing classes. A class brimming with men and only one other woman, a John Wayne "speak-alike" for instructor, and other characters in Vincent's fly-fishing education make for some appropriate May/June reading. Turn to her "Perspectives" on being "Caught by a Rainbow." She and her husband spent last summer fishing in Wyoming and Montana. They have subsequently bought land in Montana, and Vincent hopes to spend as much time as possible exploring the state's trout waters. She is a psychotherapist in Colorado when her fly rod is in cold storage. Her article begins on page 6.

* * * * *

• Everything you always wanted to know but didn't know where to find the answers is presented in "Identification of Montana's Furbearing Mammals." The guide begins on page 11 and the following pages present information about status, identifying characteristics, habitat, food habits, life history, similar species—plus glorious paintings in full color—of nine official furbearers, six predators, and two nongame species.

Information for the descriptions of each of the species was prepared by **Michael R. Frisina** and **Kurt L. Alt**. Frisina is the statewide range manager for the department's Wildlife Division. He is president-elect of the Montana Academy of Sciences and has worked on a wide variety of projects relating to range management and wildlife/livestock interactions. Alt is a wildlife biologist in Region Three (Bozeman).

Many readers will recognize the **Robert Neaves** touch in the paintings accompanying the furbearers guide. The series of paintings presented in this issue is for sale as an entity, and no sale of individual prints is planned. Neaves is a third-generation Montanan and a full-time artist. He specializes in wildlife and western themes, and his wildlife work has been seen many times in these pages. His work has been exhibited in prestigious shows and museums, including the Joslyn Art Museum in Omaha and the Carl-Schutz-Haus in Freiburg, Germany. The Museum of the Rockies in Bozeman recently devoted its main floor to a five-month exhibit of Neaves' series of historical paintings, "Montana Portraits—The First 100 Years." His work also hangs in permanent collections throughout the United States and in Europe. Neaves and his wife Marianne operate Robert Neaves Gallery in Hamilton (109 South Fourth Street; Hamilton, MT 59840—406/363-3292).

* * * * *

• Various Indian tribes called it "The Gate to Heaven." **Lee Bastian** presents Lost Creek State Park as a "Lands Legacy"—an area with rare geological formations, breathtaking scenery, and the opportunity to see mountain goats, bighorn sheep, elk, mule deer, and many other wild creatures. Lost Creek Falls, ruins of a mill, and an abandoned miner's cabin are other attractions. Amenities include improved roads, a new well, directional and interpretive signing, a paved foot trail to the falls, new tables and grills, and facilities for visitors with disabilities. Bastian notes that "...our state parks provide natural outdoor classrooms and learning experiences from which everyone can benefit." Visit Lost Creek State Park this summer and see if you agree. Bastian is the parks manager for Region Two (Missoula). He wants readers to be aware that a new Lost Creek State Park brochure was produced in 1992; he wishes to thank the Montana State Park and Wildlife Interpretive Association for its support and funding assistance in this project. Turn to page 31 for an appealing glimpse of Lost Creek State Park.

* * * * *

• If you were told that "Shelter from the Storm" was an article describing the Montana Department of Fish, Wildlife & Parks' strategic management document and that it was written by the department's deputy director for staff operations, you might be pretty quick to find something else to do. If you were that deputy director and had been immersed in the evolution of the strategic management process for months, and months, and months, you might be just as quick to take advantage of the opportunity to separate yourself a bit by use of a nom-de-plume. Also, use of a pen name might enable a potential reader to approach the material afresh, without baggage. These are some of the reasons **Patrick Graham** chose to write under the pen name **Ben Gordon**. Graham's/Gordon's article is unusual, but we think you'll be thoroughly engaged when you turn to page 34. The document—the department's vision for the future—will set long-term direction, yet provide the flexibility the agency needs to adapt to a changing environment; a 10-page summary of the strategic management plan is available by writing Department of Fish, Wildlife & Parks, 1420 East Sixth Avenue; Helena, MT 59620.

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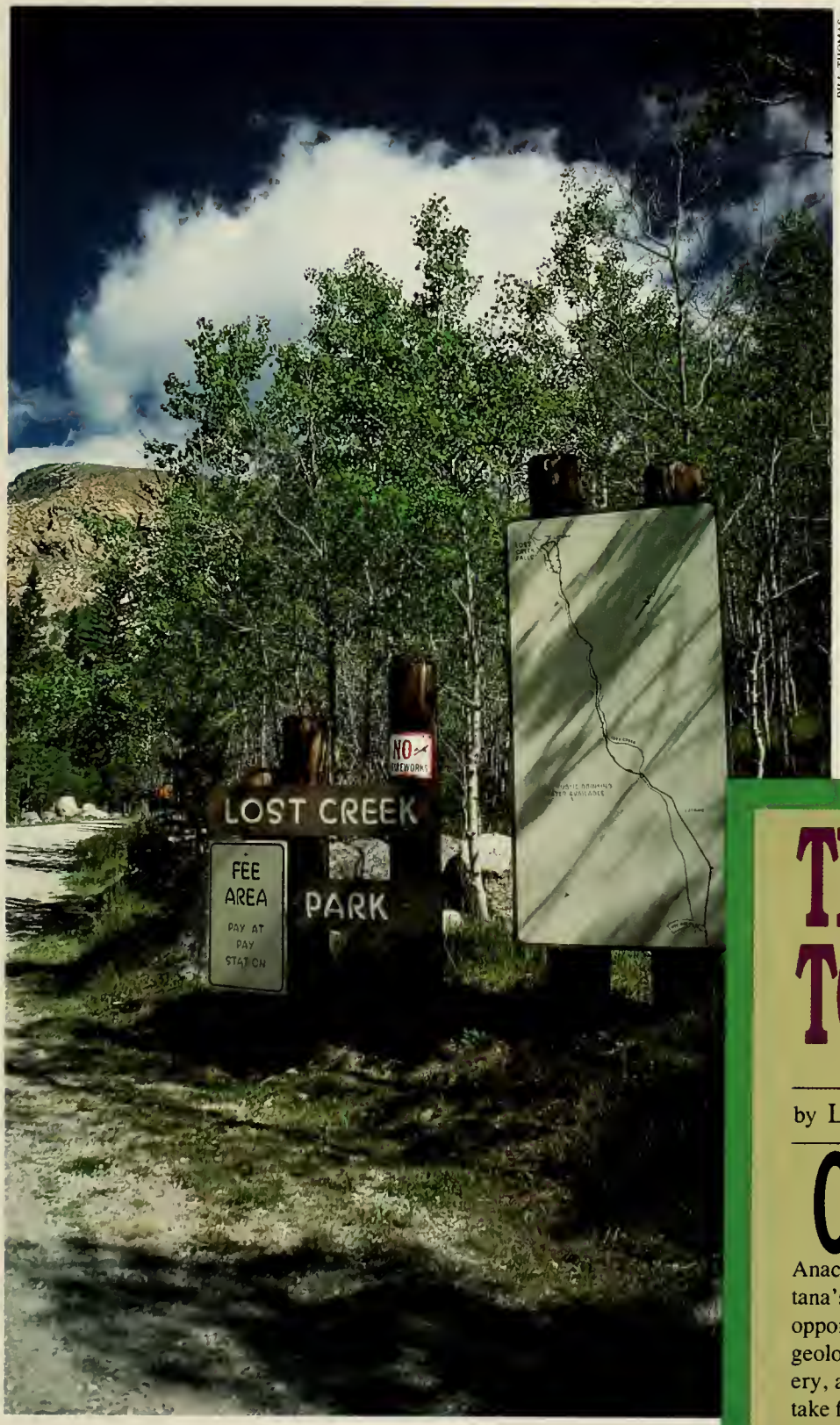
• *MO* thanks the following photographers and artists for their contributions to this issue: **Harry Engels**, Helena; **Diane Ensign**, Bozeman; **Diana Haker**, Worden; **Joe Mac Hudspeth, Jr.**, Jackson, Mississippi; **Raleigh Meade**, Great Falls; and **Don Wheeler**, Butte. Thanks also to the following contributors who work for the department: **Darlene Edge**, Helena, and **Bill Thomas**, Missoula. ■



BILL THOMAS

LOST CREEK STATE PARK

THE GATE TO HEAVEN

by LEE BASTIAN

ONCE CONSIDERED "THE GATE TO HEAVEN" by various Indian tribes, Lost Creek Canyon near Anaconda is the location for one of Montana's premier state parks. It provides opportunities for the visitor to view rare geological formations, breathtaking scenery, and bountiful wildlife. It's a place to take friends and family—a spot where you can escape the hustle and bustle of today's busy schedules, kick back, relax, and enjoy what makes Montana so appealing.

Located on U.S. Forest Service (USFS) land, state park status for Lost Creek had been the vision of the Ghost Trail Committee of the Anaconda Chamber of Commerce. They helped secure the first use permit between the Parks Division (which was in the Department of Highways at that time) and the USFS. Lost Creek State Park, named for the small, clear mountain stream that runs through the bottom of this 3,000-foot canyon, became a state park in 1957. Because of the area's uniqueness and the abundance of its natural assets, the Department of Fish, Wildlife & Parks and the USFS are discussing land trades that will secure Lost Creek as a state park forever.

One may question what criteria should be considered when talking about retaining an area forever as a state park. There are no specific criteria that work perfectly every time, but each area needs to be evaluated according to its natural, cultural, historical, and recreational resources. And, we must examine how these resources better the lives of the men, women, and children of Montana. Indeed, maybe these are the basic criteria that fit the visions and needs of what state parks are or should be. Let us consider Lost Creek State Park to see if it has resources of this magnitude.

BILL THOMAS

Bighorn sheep were transplanted to Lost Creek Canyon from the Sun River area in 1967.

By examining the rock walls that form Lost Creek Canyon, the visitor can learn much about the geological processes that occurred millions of years ago. To the northeast, even an untrained eye can see results of awesome forces that left their mark, such as the light colored, grayish-pink band of rock (a granitic dike) that cuts diagonally across the layers of the Newland Formation. Seventy-five million years ago, when the Rocky Mountains started to uplift, these rare dikes were formed from molten rock that oozed into cracks in the formation. Upon further investigation of the cliffs, you will see grayish-green rocks layered by the compaction and hardening of lime-rich muds. These muds were deposited in a shallow sea 1.3 billion years ago. The glacial age also had its impact on Lost Creek as glaciers cut through the overlying rocks on their way down the valley. In the large slabs of rock the glaciers left behind, you can still see granitic rocks that were exposed to weathering processes called exfoliation.

Another glance at the cliffs, overhangs, and rock walls of Lost Creek Canyon and park visitors could be delightfully surprised when their eyes focus on mountain goats and bighorn sheep. The Rocky Mountain goats are native to the area and can be found in the alpine meadows searching for grasses, forbs, lichens, and shrubs. The bighorn sheep, on the other hand, were transplanted from the Sun River area in 1967. Until fall of 1991, this population had established a strong niche for itself in Lost Creek State Park, but the ever threatening challenges to the ecosystem found the sheep population infected with the virus *Pasturella spp.*, commonly called pneumonia. In 1991, approximately 50% of the herd was affected, but because of the natural habitat found in Lost Creek, the sheep population should come back. With luck, visitors might also spot elk and mule deer. In fact, this may be one of the few places in Montana where all four big game species can be seen from one vantage point in the spring of the year.

For scenic vistas and raw beauty, Lost Creek Canyon is hard to beat. The conifer-laden valley floor and hillsides provide the sense of what it must have been like for the trappers, miners, and Native Americans who traveled or lived here. At the northwestern end of the park, visitors can hike up a short trail to Lost Creek Falls, where clear, sparkling water cascades for 50 feet over rock and shale. This breathtaking scene, a place of solitude and peace, quiets the souls of all who visit.

As one hikes the rocky terrain above the falls, the visitor can see ruins of a mill and an abandoned miner's cabin. Downstream from the entrance is a rounded knoll used as a burial ground by Indian tribes. Yes, history can be seen and felt when you visit this special place.

To the camper, hiker, photographer, wildlife watcher, horseback rider, cross-country skier, and mountain biker, Lost Creek provides a multitude of opportunities. It allows the park user to enjoy and experience a piece of Montana that hasn't really changed much over the years. In fact, with so much to see and do, one would exclaim that this state park meets the mission of what state parks should be: "That the Department of Fish, Wildlife & Parks, through its employees and citizen Commission, provides for the stewardship of the fish, wildlife and park resources of Montana, while contributing to the quality of life for present and future generations."

To protect and preserve a unique place such as Lost Creek, while allowing visitors to use and enjoy it, a certain amount of development is needed. In the early 1980s, and again in 1991, Lost Creek received some much needed improvements, such as road work; a new well; directional and interpretive signing; a paved foot trail to the falls; new tables and grills; and facilities (latrine, trail, campsite) for visitors with disabilities. Approximately $185,000 (mostly from the federal Land and Water Conservation Fund, Long Range Building Fund, Coal Tax, and user fees such as those paid for entrance and camping) has been spent for these improvements.

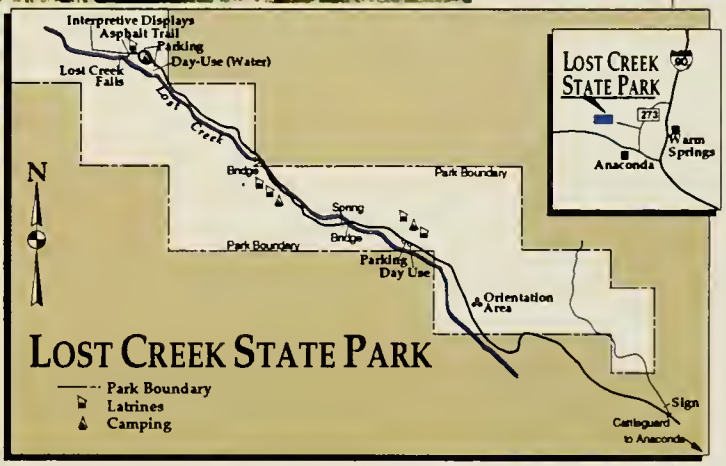
Lost Creek State Park contains two camping areas. The upper area near the falls has 15 developed sites with concrete tables and pads, plus one site designed for people with disabilities. The lower area is more primitive, with tables and grills

randomly placed among the trees to accommodate approximately 10 additional camp units. The visitor obtains drinking water through use of an old-fashioned hand pump. At the trail head to the falls and intermittently throughout the park, garbage cans and vault toilets are available. Interpretive panels have been installed to tell of the unique resources found in the park. A day-use fee of $3 or a season park passport for $15 is required for entrance to the park, with an additional camping fee of $5 for those staying the night. Additional information is available from the Department of Fish, Wildlife & Parks regional office in Missoula (406/542-5500).

When FW&P manages a site as diverse and unusual as Lost Creek, protection of the natural, historical, cultural, and recreational resources is the goal. Our state parks provide natural outdoor classrooms and learning experiences from which everyone can benefit. State parks are for all people; be proud of them. Come visit Lost Creek State Park and see if you agree. ■

DARLENE EDGE

Protecting geological features, such as the rare granitic dike cutting across the rock formation shown above, is one of Lost Creek State Park's management goals.



LOST CREEK STATE PARK

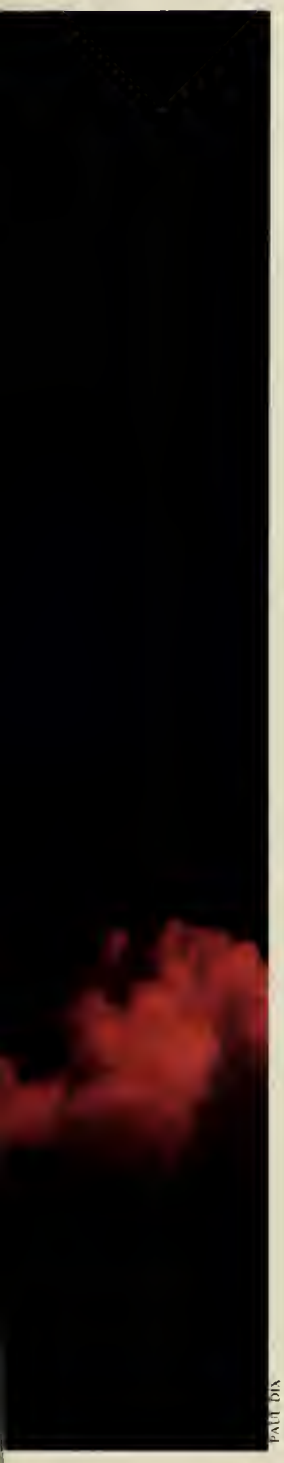
Location: Deer Lodge County, about 10 miles northwest of Anaconda in the Flint Creek Range.
Size: 477 acres of Deerlodge National Forest, 25 acres leased by Fish, Wildlife & Parks.
Access: From Anaconda, 1-1/2 miles east on Montana 1, milepost 5, then two miles north on Secondary 273, then six miles west on county road.
Management goal: To protect the natural ecosystem of the area while providing opportunities for the public to experience and enjoy this unique state park.
Recreational opportunities: Camping, hiking, mountain biking, wildlife viewing, photography, and cross-country skiing.
Wildlife viewing: Best viewing opportunities are from May 1 to November 30 when the park is officially open. Rocky Mountain goats and bighorn sheep can be seen on the rocky cliffs and canyon walls. Deer, elk, black bear, beaver, and songbirds may also be seen on occasion.

Shelter from the

The Department of Fish, Wildlife & Parks has embarked on a complex, intricate, and exciting strategic management process. Writing under the name "Ben Gordon," a department employee has taken a creative look at the changing world in which FW&P will operate and what it means for the agency's customers—you. We think you'll find that the writer's musings make fine and thought-provoking reading.

—Editor

Storm



by BEN GORDON

A GRAY-HAIRED MAN, sturdy from years of hard work, opened the barn. Rain fell on the roof like a thousand tiny dancers silhouetted in the evening shadows. Aspen leaves rustled in a golden swirl of wind, then grew still.

A younger man with pad and pencil in hand hunched over as he ran toward the porch. He tried to shake off the rain as he waited for the old man to return from doing his chores.

Together they sat on the porch and watched as the rain trailed off behind a lonely band of clouds, leaving clear skies and the fresh smell of pine. Streaks of red and violet stretched above the mountain crest where the first snows of autumn could be seen above the tree line.

"Forest fires," said the old man.

"What?" asked the reporter, shaken from his trance.

"Smoke from forest fires. Makes for a damned fine sunset."

"It certainly does," said the reporter. "Just looking at a map, I didn't realize how much distance there was between places out here. My name is Louis Salazar. You can call me Lou."

"My name is Ben," said the old man. "You can call me Mr. Gordon," Ben laughed. "We don't call it distance out here. We think of it as space. What brings you out here?" he asked.

"You used to work for the Fish, Wildlife & Parks Department?" asked Lou.

"Yup, called it Fish and Game back then. Some people like to think of it as a couple of four-letter words," Ben grinned.

"A lot of people across the country have an interest in what happens to the wildlife, fish, and parks in the West—especially in Montana. They think there is some kind of war going on out here. What do you think?" asked Lou.

"I started out as a game warden. Back then, I knew everybody in the department. Worked for $13 a day. Covered an area around 2,700 square miles. Times were tough, but they were also simpler.

"Before I was a warden, I worked as a logger out of Eureka. Sometimes we'd play poker all night long. Was all you could do to pack yourself into your boots the next mornin'. There was no bunch tougher.

"Worked a cattle ranch in the upper Big Hole. They still use those old hay stackers. Best horse feed in the country.

"I even tried to sell insurance when I lived in Miles City. Told 'em, 'You're bettin' you're gonna die, I'm bettin' you're gonna live.' That didn't last too long. That's when I joined Fish and Game.

"SEEN A LOT OF CHANGES. So many changes sometimes I feel like we're standin' against a swirling wind. We shift from left foot to right and back again, never knowin' when or if the winds will stop.

"Montanans are movin' from east to west. They're leaving the small towns and farms. A lot of those that stay are older folks like me. Those that leave the state are replaced by folks movin' in with their own ideas about how things should be.

"Loggers know there aren't as many trees and they're angry when they can't get to a lot of the trees that are left. Others fight to keep more roads out of the forests and to keep the areas wild.

"Farmers and ranchers feel threatened because their clout is eroding. Many have a tough time makin' a go of it, and they don't think they get credit for taking care of the land. Others feel agriculture controls too much of the water and grazes too much on public land.

"Seem to be more folks who see wildlife as a good business like outfitting hunters and lookers, leasing access, game-ranching, and selling wild animal parts. Can you imagine selling elk antlers in the Orient for $60 per ounce as an aphrodisiac?

I could save 'em a lot of money!

"Other folks think this commercialization flies in the face of how our founding fathers meant for fish and wildlife to be managed. They believe fish and wildlife belong to all of us to enjoy, not to just them with money.

"People are out there promoting tourism to create more jobs, but lots of people don't want to share what they got once they get here. But you know, we have a lot here that Montanans don't even know is around. An underground cavern, buffalo jumps, and a ghost town that was once the first Territorial capital. These places are our link to the Indians, explorers, and settlers who roamed the state.

"Sometimes we take for granted things that mean so much to us. We just think they'll always be there.

"Most everyone used to hunt, fish, or trap. They knew the land, the people, the wildlife. More and more people are gettin' away from the land. I think as people get farther and farther away from the land, they lose some respect for it and the people who work it.

"People's values change, too. They don't depend as much on wild game for eatin', so they look for wildlife to watch and learn about. Most hunters and fishers do the same thing, but I hear some ask why those other folks don't help pay the bills for managing and protecting the wildlife. Some folks think the wildlife agency only cares about animals people can use—you know, for food, fur, or to hang on a wall.

"I watched the old-time groups that supported Fish 'n' Game begin to break up. Most towns used to have just one rod and gun club. Now you got Pheasants Forever, Walleyes Unlimited, the Elk Foundation, and such. There's probably even a Save the Big Foot bunch somewhere," laughed Ben.

"The Indian tribes are also gettin' into the picture. They're standin' up for their rights, and some citizens are uneasy because they don't know what the Indians' rights are. It means more is goin' to change.

"And, from time to time, we feel those swirling winds of change turn bitter cold and grow stronger. We look around, and we see that the winds are gusting in from outside our borders. We are reminded when they tell us those mammoth beasts wandering out of Yellowstone Park are *their* bison, not ours. That those silver-tipped creatures wandering down from the Rocky Mountain Front and through the streets of Choteau are *their* grizzly bears, not ours. And, as they move into the state, they say those places you used to fish, hike, and hunt on as a kid—well, that's *my* place now—not yours.

"Ever been close enough to smell a grizzly?" asked Ben.

"No," said Lou, quickly looking around.

"Heck, if the bite don't get you, his breath will," laughed Ben.

"OVER THE YEARS, those of us who lived here have left our mark on the face of this land. And, it is a great land. But, we have saved far more than we used up. Our success is what attracts people here. But when they come, they don't seem to give us respect for what we have done. They assume it was always meant to be this way.

"We can be an independent bunch. In the early days, we settled more than one argument with a fist fight. But, more often we sat down over a cup of coffee or a beer to settle problems. Now it's done in courtrooms and public hearings, through impact statements and ballot initiatives.

"You need a road map to track down all them groups that get into the fracas today. Heck, every once in a while some of 'em even agree with each other. But, I think that's okay. At least they care.

"You begin to see that no one can know all the answers. There are just too many different ways to look at something, of feeling about it." Ben sighed, then leaned forward, looking straight at Lou with a glint of moonlight in his eyes. "Those differences can either bind us together and make us stronger...or we can let them tear us apart.

"If we get swept up in the idea that we're fightin' some enemy out there then, like the smoke from the forest fire, it will cloud our vision and keep us from really understanding.

"The department is struggling today to sort out its role. Some things don't change. Wildlife and fish need healthy homes—biologists call it habitat. And our parks are nothin' if we don't preserve the things that made 'em special in the first place.

"But, some things do change. The hunter and angler were so intent on fishing, hunting, and conserving wildlife, that they were unprepared when out of the woodwork an animal rights guy with his ski pole said, 'I don't think you should hunt.'

"At times, it takes extremes to get people fired up enough to look at what's goin' on around 'em and what they're doin'. Some of us—like a lot of other Americans—want a simple, quick solution to these problems. But, livin' in a tough land and havin' to work hard for what we have brings a strong sense of what's possible.

"I think the department senses, like a lot of us, that these just ain't ordinary times. A lot of forces are comin' together, creating a feeling that we are losing control, that no matter how hard we work there's not much certain about the future. And that our freedom to choose is slippin' away, right in front of our noses.

"It's kind of like bein' out in the hills when a thunderstorm rolls in on top of you. You get so worked up tryin' to find shelter you don't feel the rain, you don't smell the pureness in the air, you don't see the beauty as the lightning streaks across the sky, nor do you think about all manner of life that is born and sustained by that rain. Heck, you're just wet, cold, and tired and you want some dry, safe place to hunker down.

"This is one of those storms. But it promises to be bigger, longer, and more powerful than any we've seen for a time. Some folks are runnin' for shelter, some tryin' to strike back, and some are even tryin' to make it storm harder.

"The department can't stop the storm, as some would like. Nor should it try to make it storm harder, as others would like. But they can help people harness some of the storm's energy and store its water. I see it as a source of hope, not desperation.

"LOOK AT THAT FULL MOON comin' over the ridge. Harvest moon, they call it. It's so doggone pretty this time of year," said Ben.

"It's huge! That orange color is really something," exclaimed Lou. "I feel like we're looking out the window of a spaceship. I have never seen so many stars."

"Hear the pack of coyotes?" asked Ben.

"They're all going at once. Sounds almost like they're laughing," said Lou.

Ben grinned as he rocked back in his chair.

"All this change you talk about. Things are pretty bad?" asked Lou.

"Bad? Not necessarily. But, it will be different," said Ben. "We all look at the world a little different, so no two of us would tell this story the same way. But, I found life can be good if you let it."

"You and the coyotes," said Lou with a grin.

"Yeah, and the moon," added Ben.

"Where does this lead? What does the Fish, Wildlife and...I mean the Fish and Game do?" asked Lou.

"They gotta let more people know they really care about all wildlife and their habitats. I don't mean goin' out and counting all the three-toed, yellow-eared, tree frogs. I mean lookin' after our natural systems and keepin' a balance out there.

"If we start to lose track of some of these critters, they can get totally lost in the shuffle. Before you know it, they get on a list of endangered species, and all the decisions are made to protect that one species. The whole idea of ecosystems can get pushed right onto the back burner.

"From my experience, most hunters and anglers care about all fish and wildlife, not just the ones they harvest. That's why they get real upset with people who try to stop hunting, trapping, and even fishing. Those people can live their life the way they want, but they have no right to dictate to us.

"The department needs to let us hunters, trappers, and anglers know why they do what they do. But we also have a responsibility to be ethical and sensitive when we harvest wildlife. There's no room for slobs. Never was.

"There's gotta be the opportunity for people to enjoy and, if they choose, to use wildlife. The department needs to find more ways to work with the guys who own land to improve access and habitat. The department has gotta work with these folks just like they were partners. We're all in this together. There's also rivers to clean up and doin' more with what water we have.

"A big question the department and others have to answer is whether they are goin' to work harder at getting young people involved in fish and wildlife. And, if so, how?

"Some think the anti-hunters are the biggest threat to hunting, but I think the biggest threats are the ones that will come slowly, almost without ya noticin', like the change of seasons. They will occur if today's kids don't get the chance to learn to hunt and fish.

"The state parks are great places, but some of 'em are in tough shape. I don't know where they're goin' to get the money they need to keep 'em from falling apart. You know the

JOHN BALTZER

state advertises to bring tourists here, but we don't always give 'em what they expect when they get here.

"The folks using parks are paying some of their way now, but that's not the only answer because the locals still have to be able to afford to use 'em. I think people are finally waking up to our state parks.

"Education has got to be a bigger part of the department. They work with teachers in a program called Project WILD. It doesn't teach kids what to think, but it sure helps 'em understand what the choices are. I sure hope we leave 'em enough so there are still choices to be made.

"It's not goin' to be easy for people in the department to get all this done. They'll have to take a hard look at what they are already doin'. They know some folks will want them to strike back at the storm, while others will want to hunker down and hope it passes. Change is tough, especially when the past has been so successful.

"More and more I see people in the department gettin' out amongst the public. Getting people together, not to tell 'em what to do, but helping 'em figure it out for themselves. What makes it work is they all care. That's where the energy comes from.

"They're helpin' us see that a lot of the biggest problems facing our fish, wildlife, and parks are not one person's responsibility, yet they affect all of us.

"I don't think it's a war. It's a bunch of people who feel very strongly about Montana not just as a place to live, but as a way of life. We care so much that sometimes the sparks from our fires make it look like a war."

Ben took a deep breath as he stood up to scan the sky. "What was your question again?" he asked.

"I don't remember," smiled Lou.

"We'd better get inside and stoke up that fire," said Ben. "We can discuss this in the mornin'."

A lone coyote had ventured down to the edge of the timber. He let out a howl that echoed down the valley.

"You were plannin' on spendin' the night?" asked Ben.■